

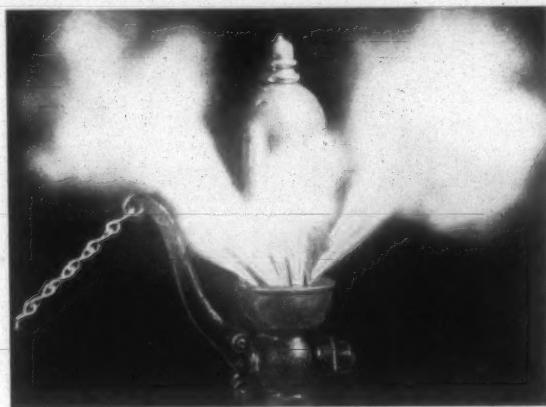
TEXTILE BULLETIN

VOL. 67

DECEMBER 15, 1944

NO. 8

DEC 27 1944



Accidents, sickness, trips to the hospital, death in the family . . . these are among the sure-to-happen emergencies that help cause absenteeism that hurts production.

Is there anything that you as an Employer can do to help shorten such periods of absence?

More and more business and industrial plants from coast to coast—many of them among the nation's leaders—are finding that a Provident HUMAN SECURITY Plan does exactly that, by bringing swift financial aid in emergencies to help workers get the best of medical care and attention.

Employers may elect their choice of HUMAN SECURITY plans operated in one of three ways:

- Employers meet entire cost
- Employers pay a part of cost
- Employees pay cost, meeting premium payments over plant payrolls.

What About Your Employees Who Will Not Be Able to Answer it TOMORROW . . . OR THE NEXT DAY?

Let us show you how such a plan can help your Employees meet such emergencies as these:

HUMAN SECURITY

- Death in family
- Loss of time due to Sickness or Accident
- Hospitalization or operation when necessary
- Aiding dependents upon death of employee
- Maternity benefits

EMERGENCY INCOME

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UNIVERSITY OF
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LIFE AND ACCIDENT
INSURANCE COMPANY

CHATTANOOGA 2 Since 1887 TENNESSEE

• Now bringing HUMAN SECURITY to more than ONE MILLION workers and their dependents •

TO THE TEXTILE INDUSTRY

—friends whose loyal cooperation we deeply
appreciate — we extend Season's Greetings
and pledge our unstinted efforts to serve you
well in the year to come.

NATIONAL ANILINE DIVISION

Allied Chemical & Dye Corporation

40 RECTOR STREET NEW YORK 6, N.Y.



THIS IS NO. 48 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

BOBBIN CLIPS No. 90 WINDING MACHINE

A very large majority of filling bobbins can be wound on solid cop holders, rather than piano wire springs. This is done by using the Bobbin Clip which grips the butt end of the bobbin, holding it firmly on the Cop Holder.

Two standard types of Bobbin Clips are available:

REGULAR UNIVERSAL TYPE (A and B in Fig. 1)

This type is characterized by narrow prongs, made of special tempered steel springs, which grasp the bobbin securely, yet release it readily so that the bobbin is easily doffed. This reduces the hazard of skinned knuckles on the operator's fingers.

The Universal Type Clip is attached directly to the end of the Driving Spindle (not the Cop Holder) by means of two set screws, and is readily adjustable back and forth on the Spindle.

When necessary, a collar up to $\frac{1}{4}$ " in thickness can be placed over the Cop Holder and adjacent to the end of the Spindle so that the butt of the bobbin will be properly positioned in the Bobbin Clip. Maximum winding area is thus obtained because no room is taken up on the Cop Holder for the Clip.

If a bunch is desired, it can be located at the extreme butt end of the winding space, thereby increasing the amount of yarn on the bobbin.

The Regular Universal Clip may be used

with Northrup automatic loom bobbins or cone base bobbins. There are several sizes to fit the various bobbin butts. For small diameter bobbins or quills, a special collar is furnished, which allows the Clip to be placed directly on the Cop Holder — B in Fig. 1.

MURDOCK TYPE (C and D in Fig. 1)

This type fits directly onto the Cop Holder. Its gripping action is accomplished by the three broad steel fingers which are contracted by an endless coiled wire spring. Doffing is very easy.

It is necessary to locate the Murdock Clip in a definite position on the Cop Holder, predetermined by the point on the bobbin at which winding is to start. Thus some room is taken up on the Cop Holder which cannot be used for winding yarn; this may necessitate the use of longer Traverse Bars, Starting Levers, etc.

It is used for the Northrup three-ring bobbin as well as for worsted bobbins. A smaller size (D in Fig. 1) is used for paper cops with a metal ferrule on butt.

Ordinary paper cops require a Cop Holder with springs and a locating collar, and no clip is available.

Because there are thousands of kinds of bobbins, it follows that there are almost as many cop holders. The particular type of bobbin must therefore be fitted to its complementary cop holder. We are always glad to recommend the particular cop holder and clip to be used with any bobbin. We urge mills to ask us to do so.

AVOIDING SOFT NOSES ON FILLING BOBBINS

Over a period of years we have observed that — on the No. 90 machine, it is difficult to eliminate soft noses when the outside diameter of the yarn mass is *more than double* the diameter of the bobbin barrel.

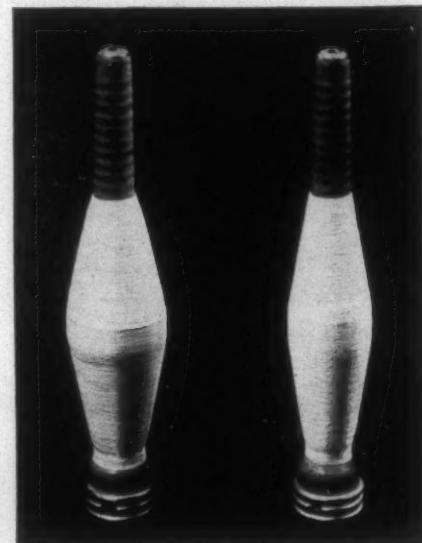


Fig. 2. Full bobbin diameter should not be greater than twice empty barrel diameter.

It is important to appreciate that there is a definite relation between the diameter of the bobbin barrel and the full bobbin which is noticeable in winding results.

Since the diameter, and hence the circumference of the bobbin, vary substantially as the yarn is being wound down the slope on the nose of the bobbin, the yarn speed is constantly changing.

Usually an overhead compensator or an overend reverse tension lever is employed to take care of this variance in winding speed and tension. When the Disc-Quill tension is used, there is no such compensation, but the applied tension is sufficient to prevent trouble due to slackening of the yarn.

However, in order to produce good firm bobbins, it is dangerous to permit the outside diameter to exceed a two-to-one ratio with the empty barrel diameter. This is particularly important when winding yarns such as nylon, which have a tendency toward a crushing action when being wound.

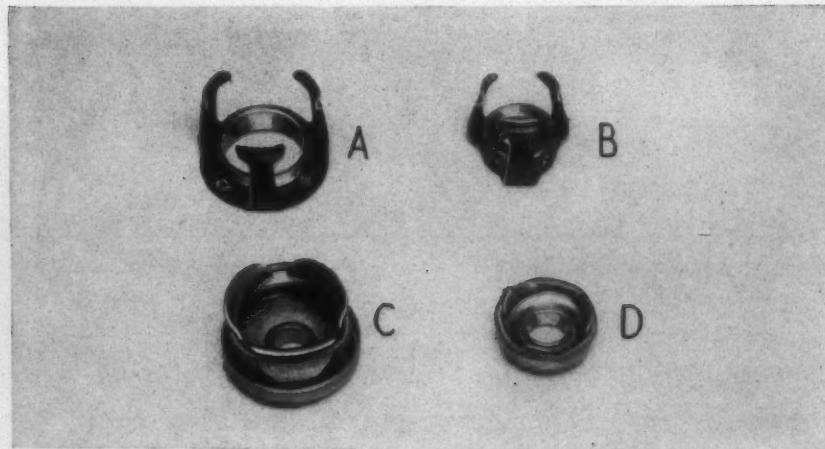


Fig. 1 Above: Universal Type Bobbin Clips. Below: Murdock Type Clips

See our Catalog in TEXTILE YEARBOOK
2343 *

UNIVERSAL WINDING COMPANY

PROVIDENCE

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UTICA

CHARLOTTE

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*Reg. U. S. Pat. Off.

TEXTILE BULLETIN • December 15, 1944

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"



**THE RIGHT
RING TWISTER
FOR Your YARNS**

While lining up your production plans, be sure you see the new ATWOOD Ring Twister and get the facts on its performance. Atwood has been building Twisters for the finest hosiery and dress goods yarns for nearly a hundred years. The new heavy duty Atwood Ring Twister has what it takes to produce clean, precision twisted, uniform yarns and do it better, faster and at lower cost. It handles from 2 to 12 ends—delivers from cakes, cones, bobbins or tubes—produces any twist you want, from $\frac{1}{2}$ to 70 turns per inch, on any size package up to 5 inch diameter, 9 inch traverse . . . Now is the time to get the story as it applies to your yarns and your production needs.

**COTTON • RAYON • SPUN RAYON
WORSTED • NYLON • COMBINATIONS**



Now with 3 stars

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**THE
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MACHINE COMPANY**

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Since

Our X Series High Speed Looms Are
Precision Built

Use Only

Precision Built Repair Parts

Or

Your Looms Will Lose Speed and
Production

Your Seconds and Costs Will Go Up

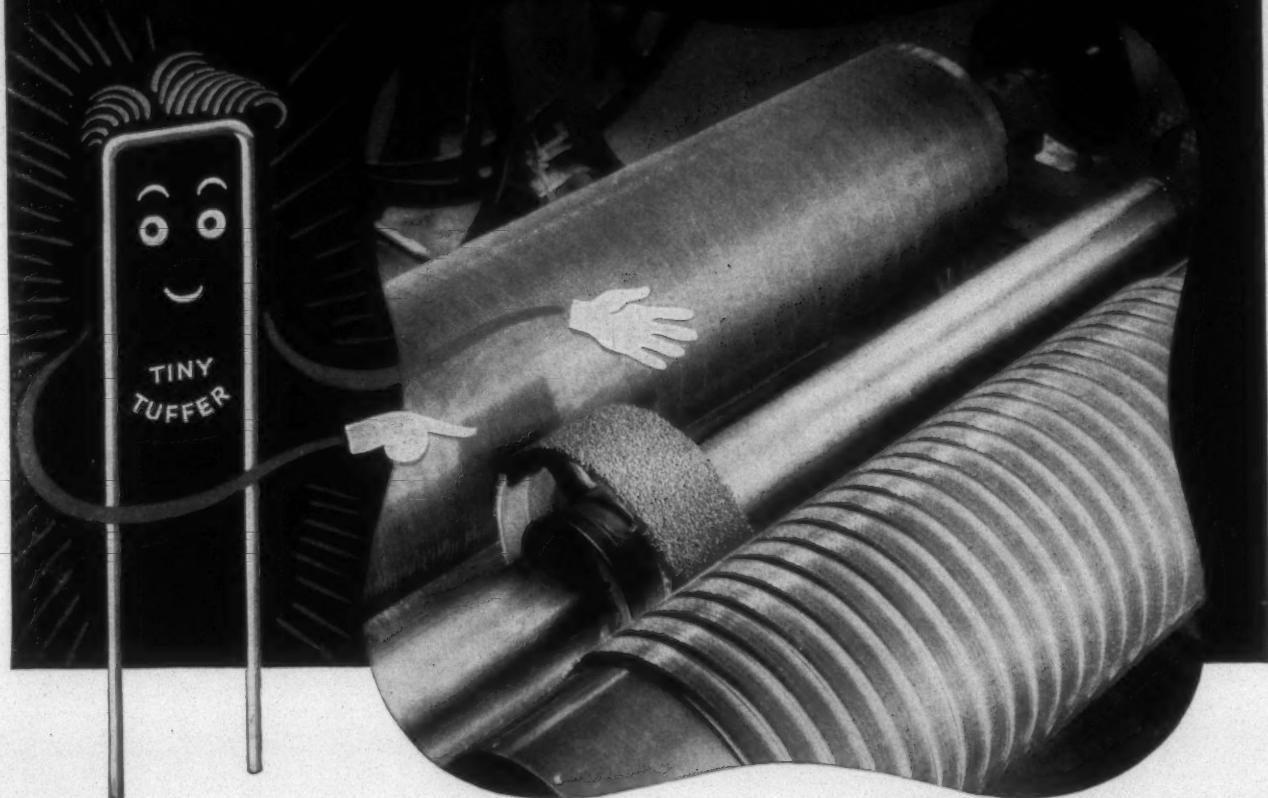
And

Your Profits Will Go Down

Only the Builder of Your Looms Can
Duplicate the Precision Parts That
Came on Your Looms

DRAPER CORPORATION

TUFFERIZED Card Clothing stays on the job with less grinding



If you want to increase production and lower costs in the card room, try Tufferized Card Clothing.

It is made from the finest steel wire . . . especially tempered for toughness and flexibility, yet it takes grinding easily to sharp, clean points.

Because it is so accurately formed and placed in the foundation, Tufferized Card Clothing is easier to strip . . . and there is less danger of injuring or dulling the points. This means fewer grindings, more production and lower carding costs.

Your best bet is to standardize on TUFFER.

TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets, Top Flats Recovered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Heddles



HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

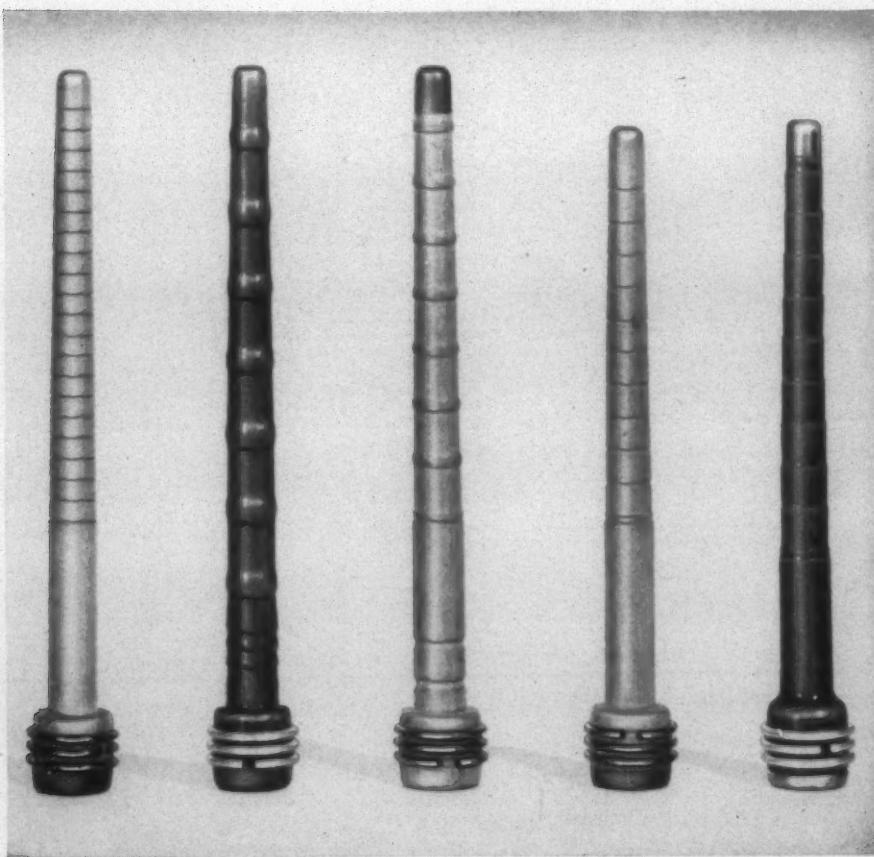
Southern Plants: Atlanta, Ga., Gastonia, N.C. Branch Offices: Philadelphia, Dallas. Canadian Agents: Colwool Accessories, Ltd., Toronto 2

When you are ready to re-equip with WOOLEN and WORSTED BOBBINS

-remember that U S has worked closely with loom builders for the past 87 years, meeting their most exacting standards.

U S knows your needs in bobbins . . . smooth-operating performance that reduces waste and improves your product—long service life that lowers costs. Only bobbins with accurate dimensions, uniform contours, extra wear resistance, and finishes that defy conditioning will meet your needs, and U S bobbin specialists know how to make sure you get them.

You also need a bobbin *design* that meets your individual processing requirements. That's why it pays to talk to a U S representative. You'll find his information up-to-the-minute on Bobbins, Shuttles, Cones, Rolls, Tubes, and other U S products—for woolen and worsted, and for every other textile.



SOME OF THE MANY BOBBIN STYLES made by U S for woolens and worsted. Left, 8 $\frac{3}{4}$ " wool bobbins in oil and enamel finishes. Center, 8 $\frac{3}{4}$ " bobbin with the feeler step cut for C&K feeler. Right, 8" worsted bobbins in oil and enamel finish.

U S

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Four Reasons Why It Pays To Consult U S

Mill-Wise Representatives

U S representatives cover every field of textile production, and can offer thoroughly experienced advice on the use of U S products in any process.

Controlled Raw Materials

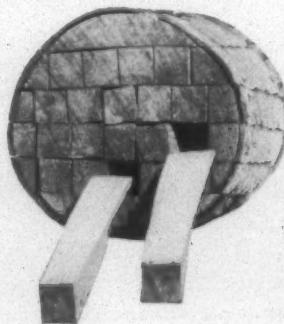
Extensive U S owned timber properties allow close control of raw material selection and processing from the source.

Ample Plant Capacity

Five manufacturing plants, in North and South locations closely keyed to textile production areas, are fully equipped to handle any size orders.

Precision Standards

U S has co-operated with textile machinery manufacturers for 86 years—can meet the closest possible limits of tolerance in all tests for dimensions, weight, and balance.



The "Split Stock" process
makes U S Bobbins
Smoother — Stronger —
Better Balanced

Splitting the stock makes sure the bobbin is "centered on the grain" for turning. With sawed stock, cross grain often causes weakness, splintering, unbalance. Specify U S Bobbins for superior performance, longer service life.



DON'T FORGET THE "Thirsty" FIBER!



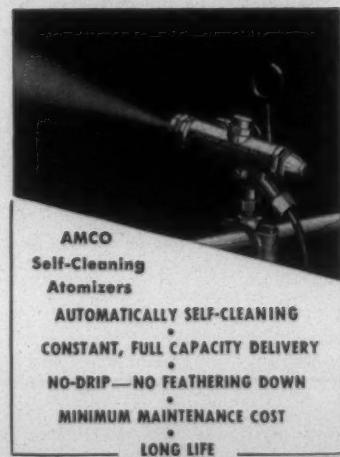
Lonsdale Company

EVERY month brings announcements of new textile machines and redesign of old ones. The requirements of greater speeds and new fibers are being met by machinery builders.

In your plans for present or postwar changeovers to newer and faster machines, remember this — *fibers are thirsty*. Unless you are ready with adequate, correctly engineered humidifi-

cation, the faster speeds and the tricky fibers will only increase your headaches and production won't come up to expectations.

Now is the time to call in an AMCO engineer. Backed by 50 years experience in handling every type of mill and fiber, he is in a position to assist you to get full value from your new machinery investments. Write or call.

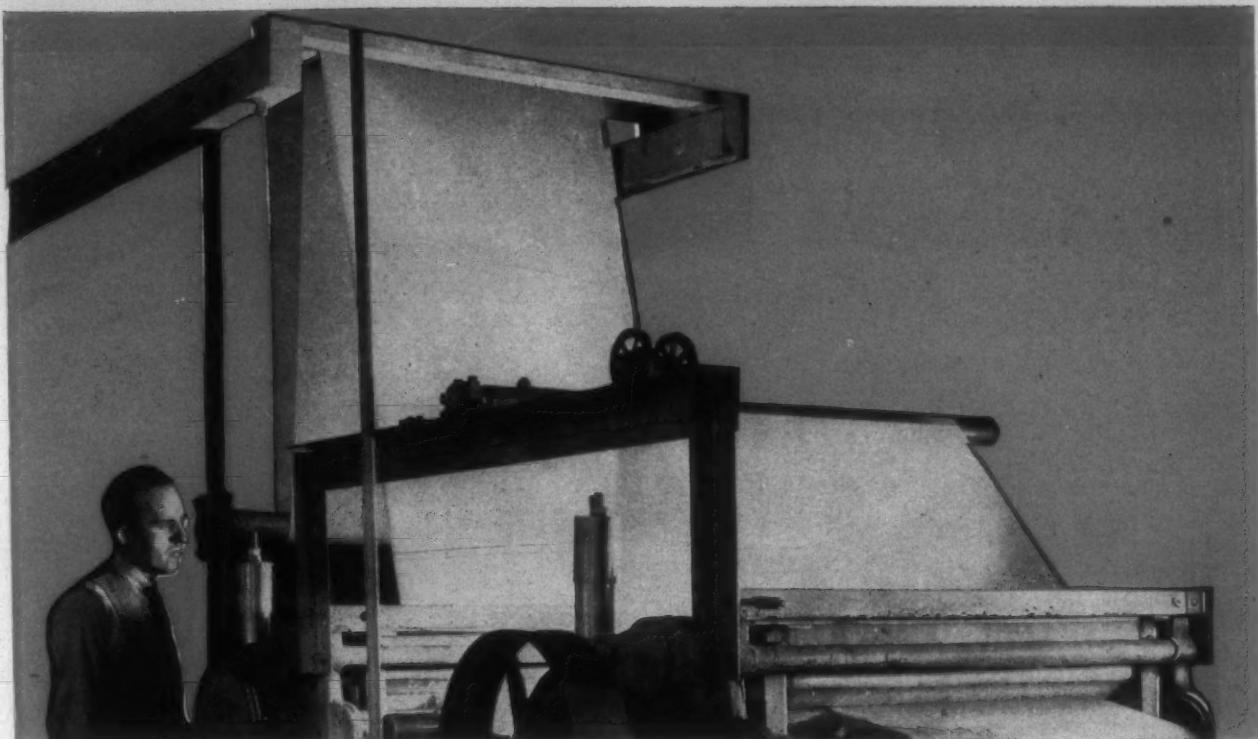


AMCO
Self-Cleaning
Atomizers
AUTOMATICALLY SELF-CLEANING
CONSTANT, FULL CAPACITY DELIVERY
NO-DRIP—NO FEATHERING DOWN
MINIMUM MAINTENANCE COST
LONG LIFE

AMCO HUMIDIFICATION

AMERICAN MOISTENING COMPANY, Providence 1, R. I. • Atlanta • Boston • Charlotte

DUPONT CONTINUOUS PEROXIDE BLEACH



INCREASES PRODUCTION OF PRINT CLOTHS

... Cuts Bleaching Time to Two Hours

Do you make lightweight cotton print cloths? How would you like to cut bleaching time from 20 hours to 2 hours? To save substantially on steam and water? To have a bleaching range laid out for most efficient operation?

All these advantages can be yours if you install Du Pont Continuous Peroxide Bleach. It puts bleaching on a streamlined production basis for the first time in textile history. Successful experiences at leading mills have already proved it practical.

Continuous process changes bleaching from an all-day job to a two-hour operation that fits right in with your production schedule. In addition, users enjoy exceptional bleaching flexibility. To change from one fabric to another is a simple matter.

With Du Pont Continuous Process, it is easy to exercise control over such factors as speed . . . steam consumption, caustic and peroxide . . . temperature . . . time.

One result of this is uniformity of color, appearance. Another is high quality of the bleach, and absorbency to improve printing qualities. A third is elimination of kier stains.

Equipment is built by recognized textile finishing machinery manufacturers from designs patented by Du Pont. For information on the use of peroxides in continuous bleach equipment write E. I. du Pont de Nemours & Co., (Inc.), Electrochemicals Dept., Wilmington, Del.

✓ THESE FEATURES

TWO-HOUR BLEACH
HIGH PRODUCTION
FLEXIBLE
NO KIER STAINS
ECONOMY

HIGH QUALITY
UNIFORM BLEACH
CONTROLLED
ABSORBENCY FOR
PRINTING



DU PONT PEROXIDES

Better Things for Better Living . . . Through Chemistry

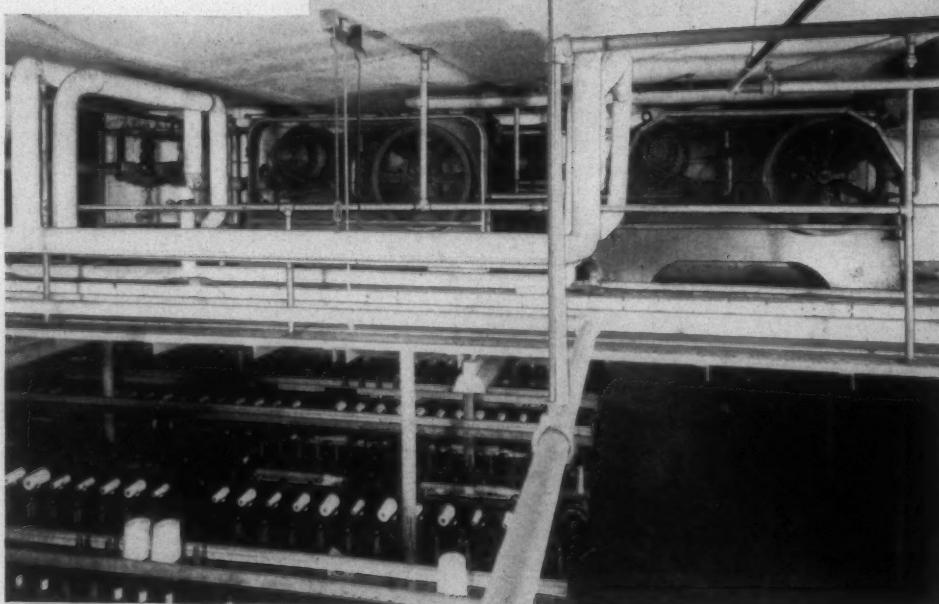


Flow plan of a typical Du Pont continuous unit

YEAR 'ROUND *Temperature & Humidity Control*

(RAYON — NYLON)

Bahnsen engineers cracked a hard nut in this case by solving the problems of a basement room, concrete construction, with 12' ceiling height — streets on 3 sides and no place to build a fan room.



Careful engineering and the flexibility of Bahnsen equipment permitted a practical mezzanine installation (4' headroom) to produce 45 tons of refrigeration in a central station of 35M CFM capacity.



Bahnsen  **System**
AIR CONDITIONING ENGINEERS
THE BAHNSEN CO. WINSTON-SALEM, N. C.

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A Merry Christmas
and a
Happy New Year



REG. U. S. PAT. OFF.

ONYX OIL & CHEMICAL COMPANY

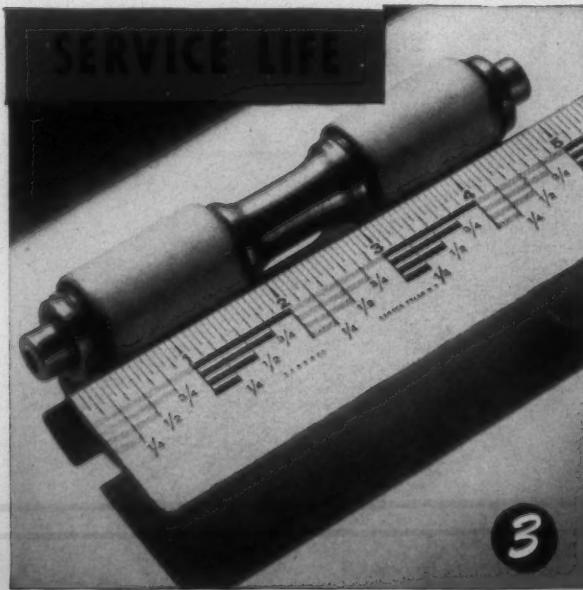
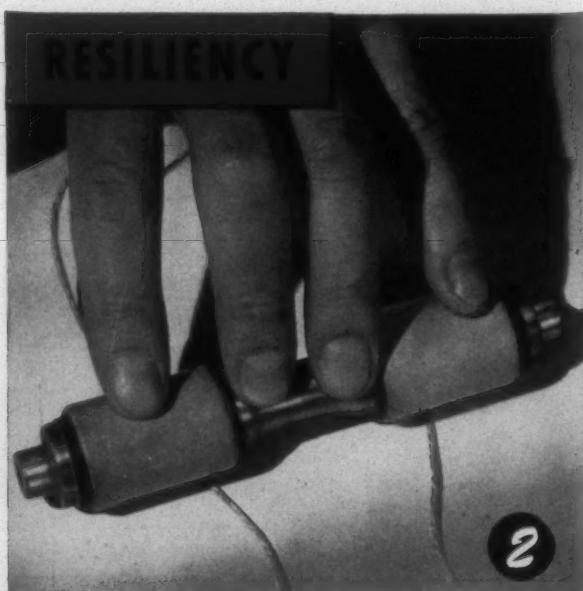
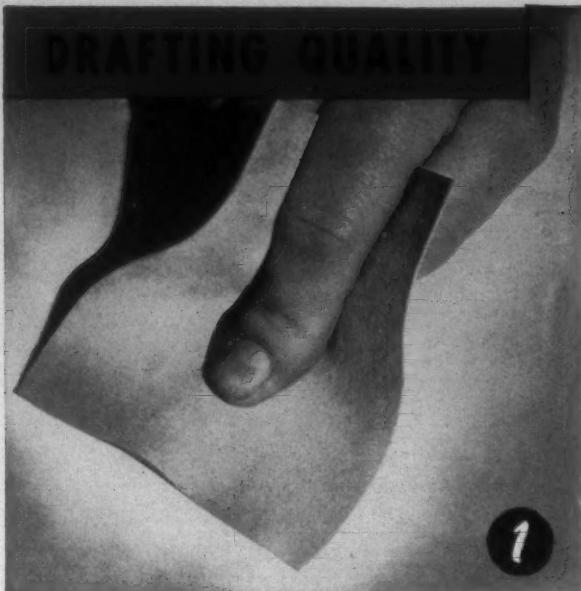
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IN CANADA: ONYX OIL & CHEMICAL CO., LTD.—MONTREAL, TORONTO, ST. JOHNS, QUE.



**PUT ANY ROLL
COVERING MATERIAL
TO THESE TESTS**
...you'll find Spinna superior in...

1 Rub the material against a smooth surface, pressing down slant-wise. If it glides along smoothly, that's bad. But Spinna Calf will move jerkily, for its high friction surface will hold it back. This test shows that Spinna will do a better drafting job . . . and will carry waste well back onto the clearer.

2 Lay a length of yarn on a table and press a roll on top of it, rolling back and forth under moderate pressure. Then look quickly at the cot. If there is a groove left in the covering, that's bad. But the triple resiliency of Spinna Calf allows it to take an ordinary hard end and recover its original smooth surface without delay.

3 Take a roll off the frame and place it against a straight edge. If the traversing action of the yarn has caused the covering to spread out toward the edges, that's bad. But a Spinna cot will hold its shape longer because the triple-resilient leather springs right back after the yarn has forced it to one side.

* * *

For freedom from the troubles that may interfere with spinning frame efficiency and yarn quality . . . and for the longer life that Spinna Calf's strong-wearing surface promises . . . tell your roll coverer: "Spinna Calf".

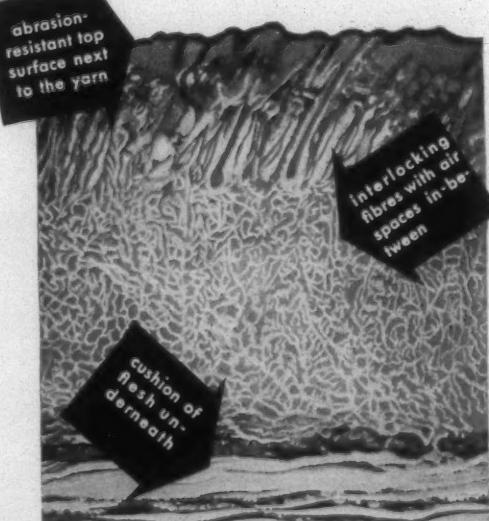


Lively
SPINNA CALF
ROLL COVERING
It's Triple Resilient



Spinnacalf

AIR CUSHIONS IN A
NETWORK OF TOUGH,
SPRINGY FIBRES

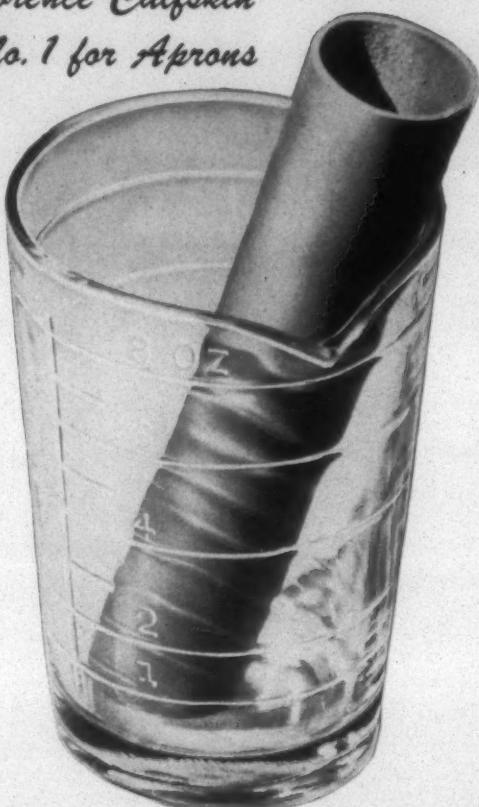


"If you want roll covering that is adjustable to all counts . . . can take ordinary hard ends without leaving grooves . . . and stays kind to the yarn for up to 18 months and more in front line positions . . . then Spinnacalf — the most generally-used calfskin — is your best choice."



CALFSKIN ABSORBS MOISTURE

*One reason why
Lawrence Calfskin
is No. 1 for Aprons*



Moisture, oil or any gummy deposits are quickly "soaked up" by a leather apron. In addition, Lawrence Calfskin Apron Leathers are impregnated with a special hygroscopic ingredient which increases absorption.

Thus, moisture which if remaining on the surface might interfere with drafting, is drawn inside the leather, not only helping to lubricate the fibres but also to increase conductivity. Static troubles are less on frames equipped with Lawrence Calfskin, because more of the static is removed from the yarn, improving the drafting and eliminating the nuisance of "crazy" yarn.

Lawrence Calfskin Apron Leather, chrome-tanned and bark-tanned, is first choice, more often, among various apron types. Begin to specify Lawrence Calfskins in your aprons and note how much better the yarn runs. You'll also benefit from the fact that they are furnished open-end for quick replacement, even in bottom positions, without having to tear down the frame or mix up apron types.



LAWRENCE CALFSKINS

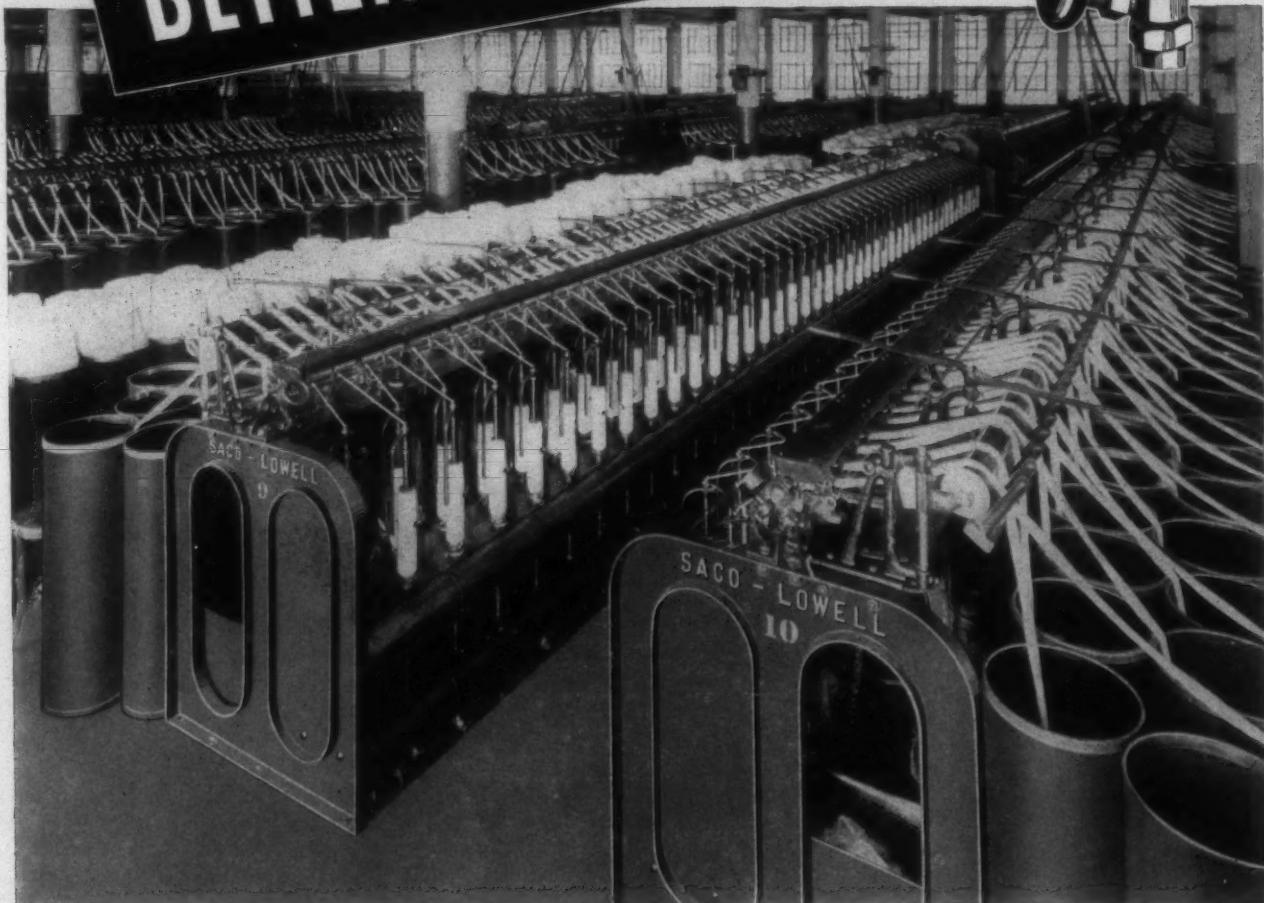
1st Choice for Aprons

A. C. LAWRENCE LEATHER COMPANY
PEABODY, MASS. GREENVILLE, S. C.

Selling Agents

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BETTER LUBRICATION
means
BETTER MAINTENANCE



If you are experiencing difficult maintenance, better check lubrication. It may be inadequate with resultant excessive wear.

Sinclair offers better lubrication for better maintenance. LILY WHITE OILS have lasting film strength . . . keep drag and temperature low . . . promote

longer life for spindle bolsters. NO-Drip LUBRICANTS are non-creeping and splash resistant. BEARING GREASE AF has the added desirability of color neutrality and water solubility.

(Write for "The Service Factor"—published periodically and devoted to the solution of lubricating problems.)

SINCLAIR TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N.Y.



TEXTILE BULLETIN



Vol. 67

December 15, 1944

No. 8

Maintenance of Union Membership

IT IS clearly the general policy of the National War Labor Board, whenever requested by a labor union, to direct an employer to maintain the union among his employees by discharging any who may withdraw from it or who may fail to keep themselves in good standing with it, financially or otherwise. The respondent company wishes, however, to register, and does hereby register, its protest against such policy as being unfair and unjustifiable in principle—a policy evolved not in the interest of employees, but purely in the interest of unions as such—and a policy which from a long-range viewpoint will probably prove to the detriment of the unions themselves.

The reasoning generally advanced to support compulsory maintenance of union membership is that labor having entered into a no-strike pledge for the duration of the war, it should be compensated for thus voluntarily laying aside the economic weapon with which in large measure it ordinarily achieves and protects its gains; and that the award of maintenance of membership constitutes such compensation. Those who have accepted this reasoning, however, seem to have taken no great pains to analyze it.

Let us assume that a no-strike pledge was literally given and has been in actuality adhered to—an assumption which, in its latter aspect at least, is considerably at variance with the facts. The question which then arises is whether such no-strike pledge was given only upon a condition, and that in return for agreeing not to strike, the unions should be maintained by the government in whatever strength and membership they might be able to attain.

At the time the pledge was generally announced, there was no mention made of any such condition being attached to it. Nor would it seem reasonable or justifiable for a no-strike pledge to have been made upon such condition or, for that matter, upon any condition. If a strike is a hindrance to the nation at war, then to refrain from thus hampering the war effort is not an act of sacrifice which entitles one to a compensation or a *quid pro quo*. In time of war, no one is entitled to say: "I will refrain from hindering the war effort if and upon condition that I am awarded a compensating security." The nation rather is entitled to say to every citizen: "Without any conditions or provisos, you will refrain from hindering the war effort." If labor unions agreed to refrain from interfering with war production only upon a condition and understanding that they should be maintained by the government in full strength of membership and finance, then it was a half-hearted pledge indeed and

one to which no government should have been a party, either in making or in carrying out.

Apart from these considerations, however, why is it that unions as such are to be compensated because *employees* may not go on strike in time of war? The primary objectives for which employees ordinarily strike are, of course, higher wages, better hours and improved working conditions. If now employees have given up such of these benefits as they generally obtain by striking, by what logic is it that not they, but their union, is to be compensated by giving to it a check-off from their wages and a requirement that they be compelled to continue as members of it? It is for their own benefit that employees resort to strikes, not for the benefit of unions as such. They strike not for any privilege of maintaining membership in or paying dues to a union, but for the purpose of gaining for themselves higher wages and better hours and working conditions.

Why the No-Strike Pledge

Prior to the enactment of the National Labor Relations Act, employees not infrequently did strike to maintain the privilege of union membership without discrimination or penalty from their employer. Since 1935, however, there has been no occasion for employees to strike for any such reason. Since then, union membership has been a legal right, protected against any attack from the employer by an administrative agency which certainly has never lacked zeal in enforcing such protection.

Therefore, since it is the purpose of strikes to achieve higher wages and better hours and working conditions, and since it is the employees who now are deprived from obtaining such benefits by that means, wherein is it a recompense to them for what *they* have thus been deprived of to award to their union a maintenance of *its* membership and a guaranty of *its* income? It is a strange sequence that in return for employees giving up what they might have obtained through strikes, their union is given something which was not the object or purpose of their strikes. In short, the recompense for "no strikes" is something for which employees had no occasion to strike and generally did not strike—and is an award not to them, but to their union, purely in the interest of its organizational maintenance.

The maintenance thus awarded to the union for itself and to preserve it as such, without reference to benefit to the employees who compose it, is obviously in the nature of

an artificial subsidy or prop. It originates apparently in the fear that under existing circumstances, employees might to a greater or less degree lose interest in maintaining union membership and good standing of their own volition. Increases in the employee's wages are controlled by the Federal Government. Scarcity of manpower and other economic factors have rendered his employer generally quite willing without union pressure to raise the employee's wages to the limit of governmental controls. The chief reasons for the employee's supporting and contributing to a labor union thus tend to disappear while such circumstances exist. The union would hardly deny this to be a fact, for if it were today willing to rely upon the employee's voluntary adherence, then why should it ask that he be put under compulsion to adhere?

False Support of Union

But if it thus be true that in the situation now existing, the employee no longer able to gain sufficient benefits from his union to justify his willing support of it, what occasion or reason is there to enforce his support of it? A labor union is not an end in itself. It is rather a means to an end. Employees form a union because through it they desire to achieve benefits for themselves. That is its reason for being. If and when it no longer serves that purpose, it no longer justifies its existence. It is not a social institution so desirable in and of itself that it must be subsidized or maintained by governmental decree in any event and at all costs. If it cannot stand of its own strength, then it should not stand. Indeed, why should a union want members who only continue as such against their will—unless it is primarily interested in the revenue which by compulsion it thus continues to derive from them?

It is respectfully submitted that if a union cannot justify itself to its own members sufficiently to retain their voluntary allegiance, then the executive department of our government makes a mistake in undertaking to compel such allegiance, even for a limited time. What is there that gives our executive a greater solicitude for the maintenance of the union than its own members have?

Some background information must of necessity be given relative to the accompanying article, originally a legal brief prepared by one of the Southern textile industry's suppliers for presentation before officials of the War Labor Board. The supplier in this case operates a plant wholly on civilian work. An election at the plant resulted in a WLB order that union membership be maintained. The company failed to agree with this decision, appealed the case to a regional board, then to the national board in Washington. The National War Labor Board ordered union maintenance put into effect at the plant and the company refused. In an effort to induce co-operation by industry in ridding itself of union maintenance, the manufacturer has made this brief available for publication. Its officials have offered assistance in similar cases.

It may be contended that the present situation wherein employees may lose interest in their union because it can no longer serve them in its normal manner is temporary, and that after the passing of present circumstances, they will again turn to the union to achieve results. Doubtless this is true, and if union membership and power have waned, they will then wax again. But in the meantime, shall it be shored up and artificially maintained at full strength by govern-

ment order?

It might be noted that the union here involved obtained its representation among the company's employees during wartime and should, therefore, be able to maintain that representation under the same circumstances in which it was gained. But however that may be, if union members withdraw voluntarily from their union because in their own interests they see fit to do so, then they will go back in when in their interests they see fit to do so. They ought to be free to move either way as their interests may dictate, for theirs is, or certainly should be, the controlling interest in the matter. The present edict, however, sets up a one-way street with a cul-de-sac at the end of it. Workers may move into the union, but not out of it.

Thus is a controversial situation said to be stabilized. It is indeed stabilized—in an arrangement singularly favorable to the union as an organization and to those who are interested in it as such. For it is stabilized in the sense that the union cannot lose, but only gain. After a fixed date, it cannot lose members or dues; but is free to gain members and dues. It is pegged against dropping back, but free to move up.

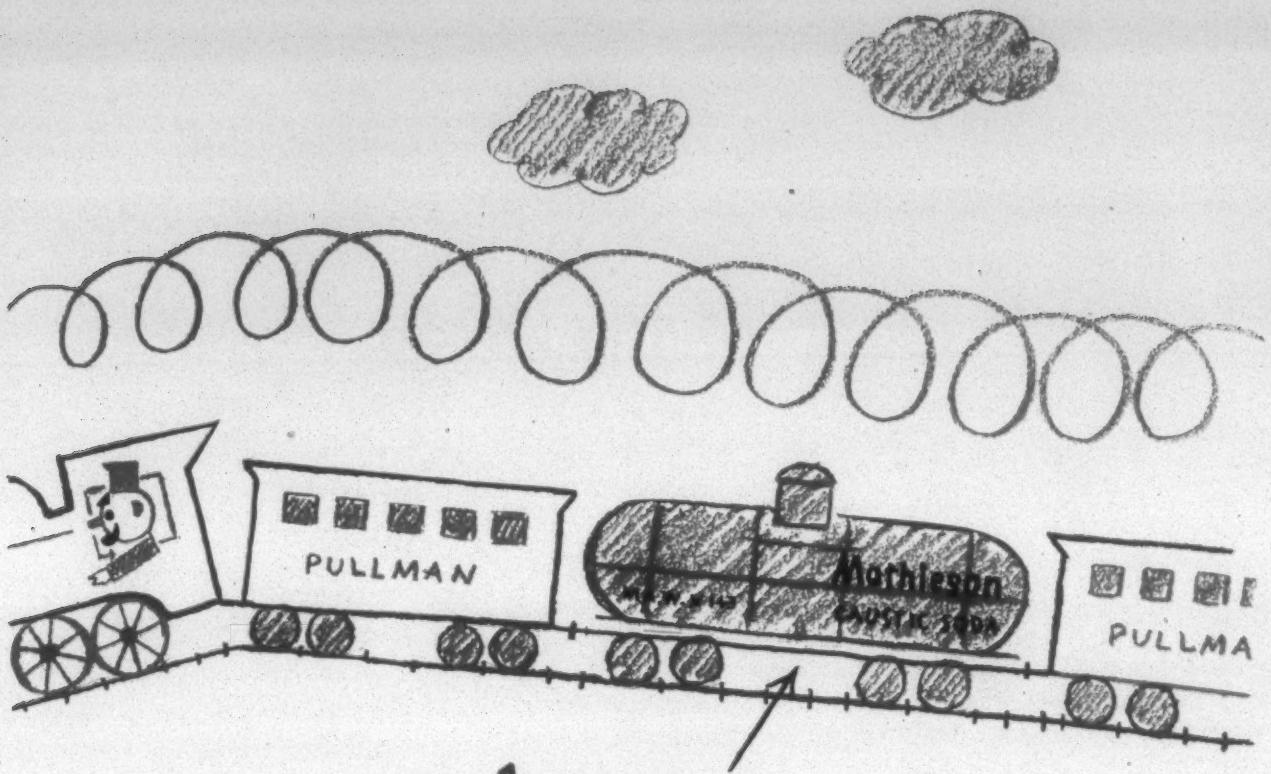
Guaranteed Progress

Moreover, under the "standard" maintenance of membership directive, not only those who are members of the union on a certain date must remain members in good standing, but all who thereafter come in must stay in and pay dues. Otherwise, they lose their employment. Thus not only is the union's position pegged against dropping back, but as it moves up, the peg under it automatically moves up. So long as the directive is in effect, therefore, the union's strength never can recede from its high water mark, but moves only to a higher and higher constantly and fully supported level.

All of which being an artificial and compulsory arrangement, to maintain a vested interest by administrative decree is unsound and unjust and a complete departure from the impartiality which citizens of the United States have a right to expect of their government.

Suppose that a large number of employers had in ordinary times an association or union whose business it was to obtain readier markets and higher prices for their production and to serve and promote their interests in general. In circumstances such as exist today, however, such employers would become less willing to support and maintain such an organization—the price of their products being controlled by the government and there being no difficulty in obtaining ready and clamoring markets for such products.

In such situation, the employers' organization, let us suppose, asks the government to require its members to maintain their membership with it and to continue their financial support of it—and further, that purchasers who have been dealing with a member be allowed to continue such purchases and business relation—(Continued on Page 64)



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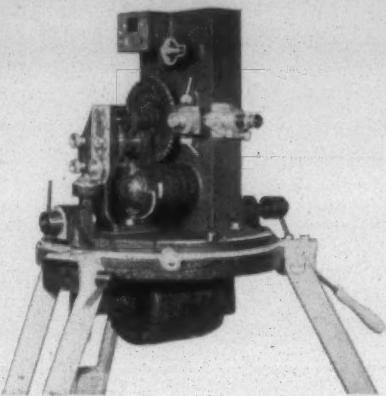
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The Place of Wartime Developments In Peacetime Textile Machinery

By ALBERT PALMER

Crompton & Knowles Loom Works, Worcester, Mass.

IN discussions of post-war planning, the peacetime uses of the wartime developments of science and industry are stressed. Enthusiastic speakers describe the wonderful equipment, materials, and processes that will be available, and create the impression that we are about to see revolutionary changes in both capital and consumer goods.

No one denies that astounding results have been achieved, many of them by individuals and organizations to whom the fields of wartime endeavor were entirely unfamiliar. We all have learned much and expect to learn more when information which is now withheld can be released for public consumption. We expect to use our knowledge in the improvement of the products that we manufacture.

New ideas and products are and will be available. But they cannot be put into use as readily as the average post-war planner would lead us to believe. The gap between their use in the equipment of war and their use in the equipment of peace must be bridged. There is no short cut. It cannot be jumped. It must be crossed on a structure of engineering study and thought. Much time and effort will be involved. Changes will come. But they will come slowly. Some will be effected immediately after the war. The majority will not.

Every new idea that is proposed for textile machinery must pass a rigid examination. First, it must be studied to show that its use is practical and feasible from the engineering standpoint. Second, its effect on the price of the machine must be determined. Third, its justification in the light of the resulting price must be proved.

A new idea is worthy of consideration when it: (1) increases the speed of a machine; (2) increases the continuity of its operation; (3) decreases the work of the operator; (4) decreases the cost of maintenance; (5) improves the quality of the fabric produced; or (6) improves the appearance and utility of the machine.

In endeavoring to use new ideas, the average manufacturer starts with no information, except the generalizations of post-war planners, unless he happens to have had first-hand experience through his own efforts. In some way he must learn what the new developments are and how they are used. Several avenues are open to him. He can review all the new patents that are issued. He can subscribe to some of the engineering services that make a specialty of reporting all the new equipment, materials and processes. He can visit all the exhibits and expositions that might

have new products. He can follow the transactions of engineering and scientific organizations. He can bring new men into his organization, either by hiring them outright or by engaging them on an advisory basis. He can consult other manufacturing concerns to which his attention has been called.

There are two general methods of approach. One is to hunt at random for new ideas, with the hope of running across something that might be used. The other is to define problems that exist, list the possible solutions, determine the most promising solutions, and concentrate on them until the answer is found. Both methods have a place in any development program. The former may lead to improvements accidentally. The latter, however, with a definite objective and with organized and planned effort is more productive of results. A good illustration of random hunting is the search for new material that might have a place in the construction of a loom. There is a long list—among them aluminum, magnesium, iron and steel alloys, glass, compounds for impregnating wood, and a host of plastics. To give some idea of the task that is involved in investigating them, let us consider a few examples.

The Role of Magnesium

One of the most frequently mentioned new materials is magnesium. For war purposes the productive capacity for making it has increased enormously. The companies producing it predict that after the war it will be put to many uses and are aiding the textile machinery manufacturers to find means for incorporating it in their equipment. The principal advantage of magnesium is its lightness. It is about 66 per cent as heavy as aluminum and 24 per cent as heavy as iron or steel. It can be cast, extruded, forged, and pressed into almost any shape that is wanted, and at first glance appears to be desirable for moving parts or items like warp beams that must be handled frequently in the mills.

As a matter of fact, magnesium has been under consideration by the textile machinery industry for a long time. In 1934 we tried to make picking sweep arms and pickers for looms of it. Later, various lay parts were tried. Just before the war we were working on the design of handrails made of extruded magnesium sections, but were forced to abandon the project temporarily because the makers of



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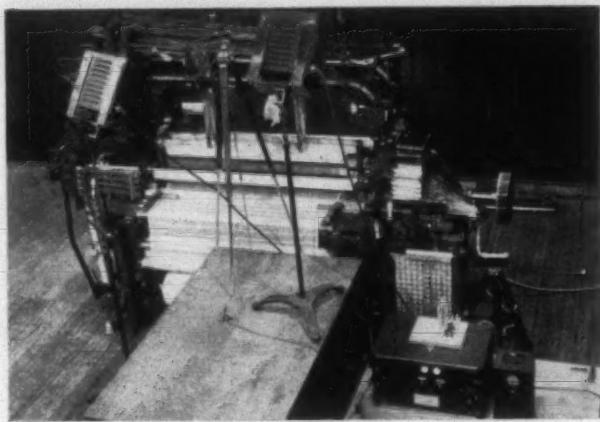
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magnesium could not give it to us for experimental purposes. There are certain offsetting disadvantages of magnesium. Its modulus of elasticity is only 22 per cent that of steel. For this reason a magnesium part, to have the same stiffness as the steel part which it replaces, must have a much larger cross section. For instance, if a bar of steel one inch square is resting on two supports spaced 12 inches apart and has a weight of 1,000 pounds hanging from it in the center, it must be replaced by a bar of magnesium 1.45 inches square if the deflection of the bar in the middle is to be the same in both cases.

If space is available and if the magnesium bar is enough better than the steel bar to justify the increased cost, the substitution is warranted. In our example the magnesium



Shown above is a typical test set-up used in study of shuttle flight. With this apparatus, consisting of a still camera and the power stroboscope, single or multiple flash pictures are taken on one piece of film. An adjustable contactor permits the exposures to be made at any point in the operating cycle of the loom.

bar would require at least 110 per cent more space than the steel bar. However, it would weigh only 1.65 pounds as compared with 3.43 pounds in the case of the steel bar. Although one-half as heavy, it would cost approximately six times as much as the steel part because extruded magnesium sections cost from 12 to 15 times as much per pound as cold drawn steel sections.

The comparison can be carried further. The tensile strength of magnesium is only one-quarter to one-third the tensile strength of steel. Inasmuch as the weight ratio is in approximately the same proportion, the weight of a magnesium part would be practically the same as the weight of a steel part to have the same tensile strength. As a substitute for cast iron, magnesium is more promising; although it has only one-half the tensile yield strength of cast iron, it is so much better in shock resistance that it probably can be used in many places to reduce the weight of a given part to one-half or one-third its weight in cast iron. The chief question to be settled, aside from other physical considerations, is whether the cost is justified. Magnesium castings at present on a pound basis cost anywhere from ten to 20 times as much as gray iron castings.

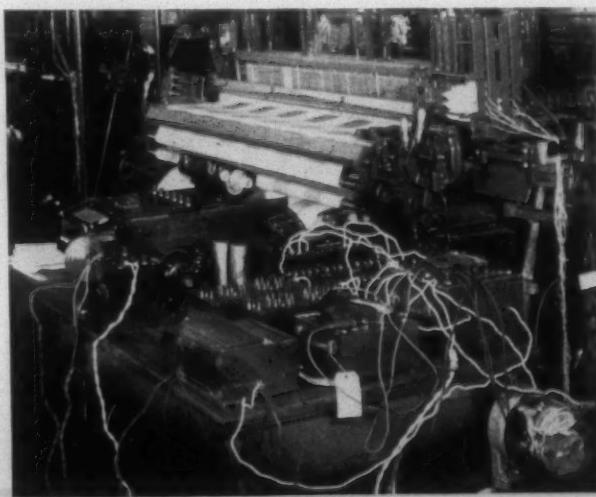
Where magnesium is considered for the replacement of wooden parts, hollow extruded sections are possible. If a wooden handrail is involved, a magnesium tube with a $\frac{3}{8}$ -inch wall and the same external dimensions could be used. On a 92-inch loom the resulting handrail would weigh approximately 20 pounds in both cases. The only way in which to save weight with magnesium would be to increase the external dimensions of the part and reduce the wall

thickness. Here again is a small reduction in weight and an increase in cost justified?

Where a large amount of machining must be done, the use of magnesium results in a saving. For example, because of the high speed at which magnesium can be machined, the time for turning the face of a beam flange is only 25 per cent of the time required for the same operation with cast iron. This advantage, however, is offset by other problems. If holes are to be tapped in magnesium for screw threads, the length of the thread must be at least twice the length of the thread in a similar cast iron part. Magnesium is relatively soft and must be protected against wear by steel coverings, inserts or liners. Similarly, it must be protected against galvanic corrosion when it comes in contact with other metals. Allowance must be made for expansion and contraction under varying conditions of temperature. In the fabrication of textiles it is undesirable for certain parts because it will smudge the fabric. Magnesium undoubtedly can be used to some extent in textile machinery. Design changes will be necessary. After that, the question must be answered: "Do the advantages of magnesium justify the increased cost of the machine?" Perhaps its suppliers will settle the matter by reducing the cost of the material.

We have heard much about plastics and have become familiar with them through their increasing use in everyday objects. For this reason we all are interested in them. A short time ago a member of our organization had an idea that because valve wheels for battleships are made of plastics, we might adopt the same material for handwheels on looms. A company which manufactures large quantities of valve wheels was approached. At the outset we were told that we must spend \$3,500 for a mold. Then we were, after much figuring, offered the handwheel at a price which was about 50 per cent more than the cost of the pressed steel wheel that we are using. There was some saving in weight but there was a grave question concerning the serviceability of the plastic product. Naturally, under these circumstances, we did not carry the matter further. Eventually the problem was solved by making the handwheel of plywood, fitted with a cast iron hub and a steel rim. The saving in both weight and cost was considerable.

Another attempt was made to use plastics in the case of



For power analysis of looms the above test facilities are set up. By means of the recording oscillograph the momentary power demands of a loom and its component mechanisms can be examined throughout its operating cycle.

sheaves for loom dobbies. These ordinarily are made of wood. Several manufacturers—with our assistance—have endeavored to make a plastic substitute. The lowest price that we have been quoted for a product that would give reasonable service is double the price at which we sell the wooden sheaves. Despite this higher cost and despite the trouble that the plastic sheaves have given by chipping, a few mills are using them.

Attempts have been made to fabricate pickers of plastic materials. We worked for several years with one manufacturer to develop one but had no success. The material would not stand the shock load and went to pieces after a few thousand picks. The only substitute for rawhide and leather which shows promise at present is the rubber impregnated material which is being molded into pickers by a Western manufacturer.

Recently another company brought out a very interesting development in a plastic impregnated fabric sheet that can be formed very easily with inexpensive dies and the application of moderate heat. One of our engineers thought it might be used for a dust cover to protect the harness pull-down motion of a loom. Investigation showed that the bare cost of the material was more than the completely fabricated part made of sheet steel.

The chief drawback of plastics, aside from their physical characteristics, is the high die or mold cost. It is inconsequential on things like combs, tooth brushes and other articles which are made in tremendous volume. But on textile machinery, the story is different. In many cases the cost of the dies and molds is not justified by the relatively small quantity of parts used. As time goes on, however, we hope that some method will be found to overcome this difficulty.

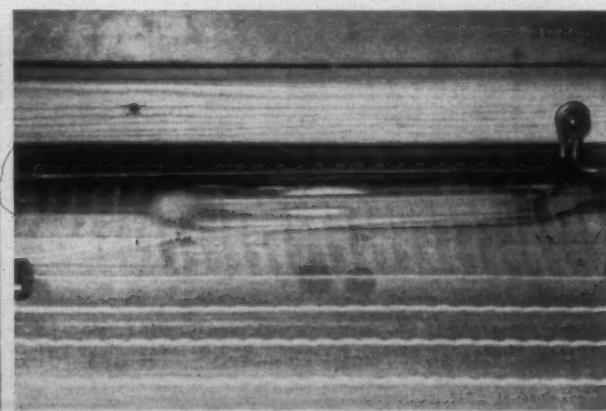
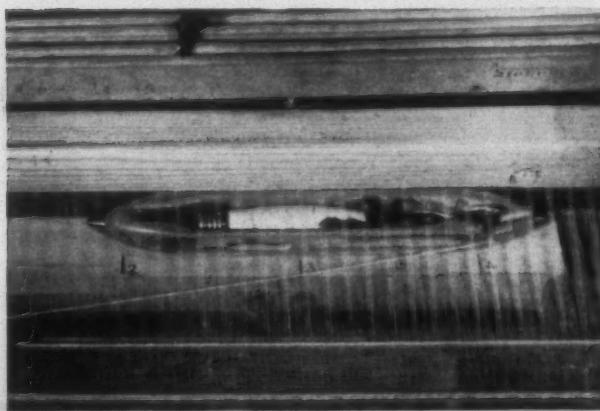
The most intriguing problem that the loom builders have tried to solve to date is the improvement of the picking motion by which the shuttle is thrown across a loom. To those who are not familiar with the textile industry and the attempts that have been made to perfect it, the mechanism seems crude. It is the first part of a loom that is pointed out as one that should receive engineering treatment. The immediate reaction of everybody who sees it for the first time is that he could build a much better one himself, and that the textile industry has been decidedly backward in not producing something that is more in keeping with the scientific design of other types of machinery.

A review of United States patents which have been issued

since 1850 shows that approximately 1,400 have been granted on this mechanism alone. They cover arrangements that operate on various principles. Roughly grouped, they can be described as pneumatic electric, and mechanical. Almost every conceivable type of application is included. Some of them have failed. Some have proved desirable for special purposes. Some have performed in a remarkable manner. But not one of the inventions has become a worthy successor to the picking motion that is in general use throughout the textile industry. The fact that so many inventors have failed to realize their ambition, immediately raises the question "Why?" The answer is twofold—practicability and cost.

A recent attempt on the part of an engineer and a professor of electrical engineering to make an electric picking motion illustrates the point. They devised a shuttle which is equipped with a metal fin on the bottom. This projects toward the fell of the cloth and passes between the poles of electromagnets which are in the shuttle boxes. The electromagnets are wound like the field of an induction motor; in fact, the arrangement is not unlike an induction motor cut and rolled out flat so that the magnetic field, instead of rotating around the axis of the motor shaft, continually moves laterally from the outside of the shuttle boxes toward the center of the loom. The traveling magnetic field induces a back electro-motive force in the fin which, acting as the rotor of the induction motor, gives motion to the shuttle. This electric picking motion is arranged so that the shuttle is thrown from one box to the other by the traveling field produced by an alternating current circuit. The receiving box is connected in a direct current circuit and has a stationary field that checks the shuttle and brings it to rest in the final position determined by the strength of the stationary field. A system of contacts then reverses the connections so that the windings of the box which has just received the shuttle are in the alternating current circuit and those of the box from which the shuttle came are in the direct current circuit.

The loom operates very quietly and nicely at about one-half the speed of the conventional loom but has several limitations. The windings of the flat motors correspond to those of an induction motor which is larger than the motor generally used to drive the whole loom, including the picking mechanism. Their size and electrical characteristics would make the cost of power—(Continued on Page 47)



At left is a shuttle photographed by fast camera for still pictures; even an exposure of 1/1250 of a second is not fast enough to immobilize the shuttle, since during that time it travels approximately one-half of an inch. At right is the same shuttle photographed with the power stroboscope; here the exposure is made under a burst of light equal in intensity to approximately two million watts of incandescent light lasting for 1/100,000 of a second.



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Processing Wartime Cotton Goods to Meet Military Requirements

By L. M. RICHARDSON

Part Two - Heavy Piece Goods

In the initial article of this series (see Dec. 1st issue), processing and dyeing of vat olive drab shades on 8.5-ounce herringbone twill was outlined; the author stressed the importance of handling all of the heavy outerwear fabrics in open width throughout all operations. The current installment will cover the preparation and dyeing of these heavy fabrics relative to methods of stepping up production and at the same time maintaining the best results. Many finishing plants have found it valuable to work out a general processing method for these high-quality military goods, then adapt the time element according to particular constructions of the various fabrics.

THE first steps in the preparation and wet processing of medium to heavy military cotton fabrics are very much the same as outlined for herringbone twills. Gray goods are removed from the bales and loaded on skids or in wooden boxes in open width, with each loose end joined by a sewing machine which produces flat seams. With the boxes and skids filled with one continuous length of cloth, the fabric is passed through the singeing machine's flame into and through a desizing mix.

There are several desizing mix formulas. The first, employing a 150-gallon quantity, is made up with 50 to 70 pounds of malt enzyme, six pounds of penetrant which is free from disinfectant or destroying action. If the new types of concentrated enzymes are used poundage may be reduced accordingly. Water should be heated to 120° F., steam cut off and the malt enzyme then stirred in with electric mixer until dissolved. The second formula uses five to seven and one-half pounds of the very concentrated pancreatic type enzyme and six pounds of penetrant. Water is heated to 120° F., and enzyme entered in the same manner. The third formula makes use of four to eight pounds of bacterial enzyme (also very concentrated), and six pounds of penetrant. This last enzyme may be used in water with temperature of 120 to 160° F. with equally effective desizing action obtained. The use of padding temperatures higher than 120° will improve the action of penetrants used and thereby aid in keeping quantities of chemicals to a minimum. Another valuable result of padding at higher temperatures is rapid solubilization of the size.

With all three types of enzymes it is advisable to have the water heated to desired dissolving and padding temperature, as any live steam entering the prepared enzyme mix different enzymes. It is optional as to how long the desized baths tends to decrease the active desizing action of these

goods must stand before being boiled off for dyeing, the average standing period being three to six hours, according to type of goods under process. No matter how long the desized goods stand, always keep the goods wet out. This can be done by spraying regular tap water over the goods while in their respective boxes. If the goods dry out along the selvage or various spots throughout the cloth it will show up in the dyeing, causing light selvages or light spots in the cloth, or, in other words, bad dyeing. These spots and light selvages are due to lack of proper solubilization of sizing and removal during scouring off operation. Before the cloth is boiled off the dyer must have it on wooden shell in roll form with about 750 to 1,250 yards per roll.

One of the best ways to get the cloth in roll form is to run it through a padder mangle and clock it so as to have as nearly as possible desired yardage per roll. It is a very good idea while beaming the cloth in the above manner to run it through a one per cent mix using some kind of synthetic detergent with a mild alkali at 175° F. This removes the dirt as well as the converted starches before reaching the regular boil-off and also saves time during the boil-off (scouring and wetting), prior to mercerizing before dyeing.

There are several methods or adaptations employed in wet processing and preparing these goods so that they may be mercerized, dried and dyed by either the pigment-pad-jig reduction or continuous piece goods procedure. The first method, using an 80-gallon bath on jigs or a battery of jigs in tandem, is as follows: run ten to 20 ends at boil, with five pounds of caustic flake, one pound of neutral soap or synthetic detergent and one pound of alkaline resistant wetting agent; drop, ready for wash. In many plants limited space and shortage of the necessary jigs does not permit use of this method.

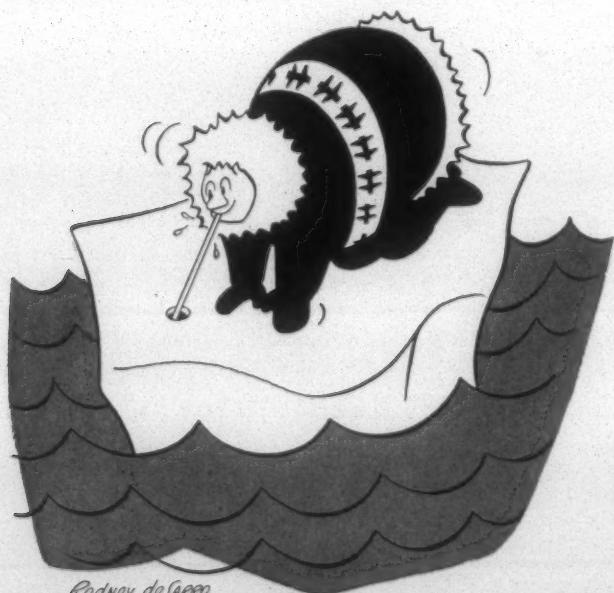
The second method, using pad and steam ager, employs one of two pad baths. The first bath, run at 180-200° F. (by volume) is made up with 0.2 to 0.4 per cent alkaline resistant wetting agent and 0.1 per cent synthetic detergent. The second bath (with same temperature) is made up with 0.1 per cent wetting agent, 0.05 per cent synthetic detergent and six to eight per cent caustic. Run into steam ager and keep at a few pounds pressure for 30 minutes to one hour until motes are sufficiently broken up in the goods. Run on jigs or continuous boil off machine at slow speed for thorough removal of size and malts, giving the necessary hot and cold washes prior to drying and the mercerization which follows drying.

In the third method, continuous boil off machines may

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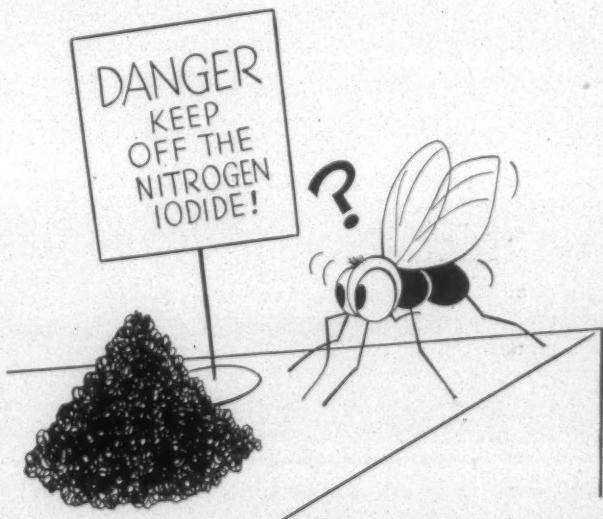
Rodney deSarro

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be laid out to simulate the action of several jigs in series, with or without under-liquor squeeze rolls between each roll of cloth in the various compartments. The various compartments must be charged with concentrated scouring and wetting agents (as in the first two wet processing methods), and kept up to strength by addition of fresh liquor at intervals. These intervals are determined by speed of machine, yardage of goods entering and leaving machine, approximate take-up of scouring and wetting agents by heavy cotton goods under process, and by the loss of processing liquor when final squeeze rolls slop off waste liquor through drain.

The scoured goods are hot rinsed; run into boxes on shells prior to drying, which in turn precedes mercerization. Some plants have found it advantageous to pad the dry and scoured off goods with special alkali resistant penetrants before mercerizing is begun.

There are other schools of thought that reduce the scouring off operation to a minimum and load the mercerizing liquor with penetrative agents, then run the prepared goods through this mercerizing liquor, hoping that they can obtain uniformly mercerized cloth from selvage to selvage. Plants using reduced scouring off operations and heavy amounts of penetrants in the mercerized liquor in many cases find it of value to use wetting agents in the vat pigment-pad and the jig-reduction baths on goods run by the pigment-pad-jig reduction procedure. The use of wetting agents in either the pigment pad or jig reduction bath is not always desirable, as these agents tend to foam excessively, thereby setting up "foam spots" (undispersed vat color in the pigment-pad bath) on the cloth. Penetrants may be added to the jig-reduction bath with better results than on the pigment-pad. Vat dyers under wartime stress of high production and rigid government specifications and inspection think it best from the production and quality basis to have goods thoroughly boiled off prior to mercerizing and dyeing, if level and well penetrated dyed goods are to be obtained in the finished fabrics.

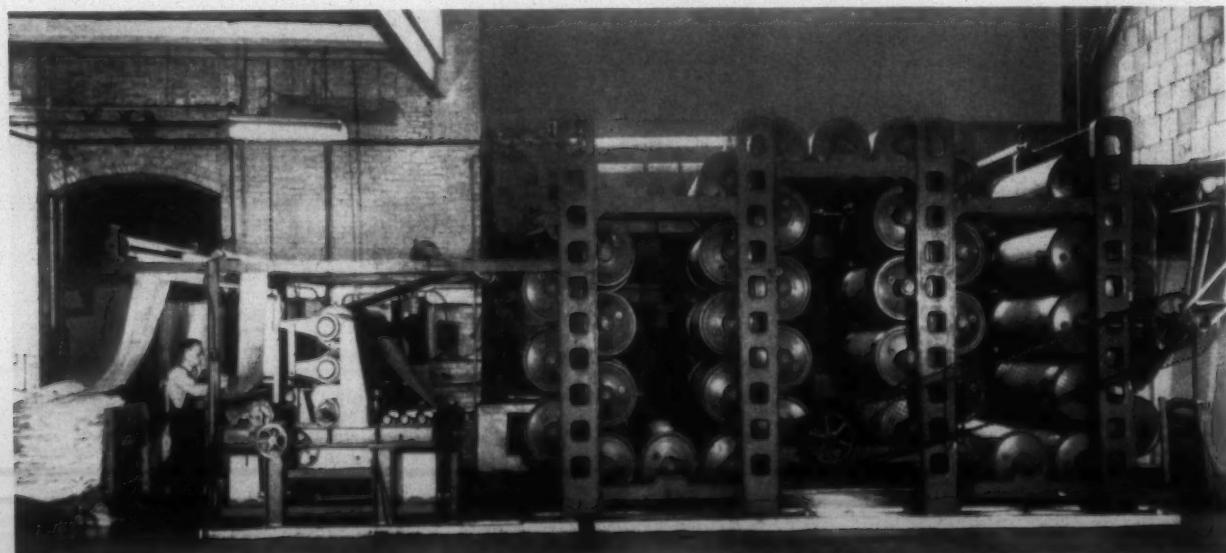
When using the pigment-pad-jig reduction method the dyeing formula and procedure is as follows: Olive Drab No. 8—2.7 ounces per gallon Vat Olive Green Paste, 2.4 ounces per gallon Vat Olive RA Double Paste and 3.9

ounces per gallon Vat Brown GA Paste; Olive Drab No. 7—3.4 ounces per gallon vat Khaki 2G Double Paste, 2.6 ounces per gallon Vat Olive RA Double Paste and 1.8 ounces per gallon Vat Olive Green B Paste.

Whenever a dyer uses a penetrant, the amount will vary from 0.1 to 0.5 ounces per gallon. At one time dyers used a small amount of caustic in the pigment bath and padded at very high temperatures. The use of caustic soda in the vat pigment padding liquor tends to make the vat color pastes form large size aggregates, thus reducing their dispersed condition and cutting the color yield noticeably. Dyers have found the best results obtained by padding at 120-160° F. with the least amount of penetrants and other agents as found necessary for the method. In the jig reduction bath, the amount used on the standard size roll of 700 to 800 yards is kept to a minimum for satisfactory reduction and stability of bath.

The usual number of ends on properly prepared and mercerized goods is not over ten ends but preferably kept to six or eight. Whenever it is desirable to use a penetrant in the jig reduction bath, dyers use one pound for a 50 to 70-gallon jig bath. The usual finishing off procedure is followed for completion of dyeing, a running cold wash two to four ends, oxidizing with bichrome and acetic at 140-150° F. for four to six ends. Where jigs are available the goods can be soaped off on jig with soap and soda ash giving six ends at 180-200° F., then hot wash and running cold rinse as goods are run onto shell. Many plants finish up the dyed goods after the oxidizing bath is completed by soaping off on open width soaper and hot washing prior to finishing.

If goods are to be finished wet, prepare for a 150-gallon mix 70 pounds of sulfonated castor oil, tallow, or synthetic compounds; pad on quetsch at 140-160° F. Some plants prefer to use a mixture especially prepared to give the dyed and dried goods better rewetting action for later finishing operations, such as sanforization and waterproofing. For such a finishing formula when applied wet, the following will give good results: 20 pounds wetting agent per 150-gallon mix (with wetting agent free of odors when fabric is dried and finished), 25 pounds of finishing oil, pad at 130° F. When the dyed goods—(Continued on Page 53)



Shown above is a modern three-roll heavy micro-set padding machine connected with drying machine. (Photograph courtesy of H. W. Butterworth & Sons Co.)



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TEXTILE BULLETIN • December 15, 1944

MANUFACTURERS OF

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WETTING AGENTS AND OTHER SPECIALTIES FOR THE TEXTILE INDUSTRY.

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South Carolina Operating Men Discuss Problems

Beginning on this page is a partial abstract of the discussion which took place during the meeting of the weavers' section, South Carolina division of the Southern Textile Association, in the textile school building at Clemson College Nov. 11. The meeting started with a brief explanation of Selective Service regulations which protect discharged war veterans by Lieut.-Comdr. W. C. Boyd, U.S.N.R., of the South Carolina State Selective Service System headquarters. M. Weldon Rogers, S.T.A. president, led the discussion which resulted from Commander Boyd's talk (see below). This part of the meeting was followed by questions and answers on five technical subjects of particular interest to weavers. F. D. Lockman, Jr., assistant superintendent of the Brandon Corp. at Woodruff, S. C., who is chairman of the association's board of governors, led the technical discussion.

CONGRESS has passed a law which, under certain conditions, gives to veterans certain re-employment rights. That law is contained in Section Eight of the Selective Training and Service Act. Under the law a returning veteran is entitled to his former position or a position of like seniority, status and pay. Those rights are provided by law. Selective Service is an administrative agency charged with assisting the veteran in obtaining his re-employment rights. At the beginning, however, I should like to state that the Selective Service System has no judicial powers and cannot, of course, interpret this law. That is up to the courts.

Under the law a returning veteran, as I have stated, is entitled to his former position or a position of like seniority, status and pay, provided (1) the veteran was in the employ of a private employer; (2) the position which he left was not a temporary position; (3) he left such position subsequent to May 1, 1940, for the purpose of entering the armed services; (4) that he completed satisfactorily his period of training or service in the armed forces; (5) he must be still qualified to perform the duties of the position to which he seeks reinstatement; (6) he must make application for reinstatement within 90 days after his release from duty. That is mandatory. Unless he makes application within 90 days he forfeits all rights under the act.

Provision No. Seven I think is very important to you as representing employers. After a veteran has been reinstated in his former position or given a position of like seniority, status and pay, he must be considered to have been on furlough or a leave of absence during the period he served in the armed forces, and he is restored without loss of seniority. He is entitled to participate in insurance or other benefits offered by the employer according to established rules and customs prevailing at the time he left the service of the employer, and he may not be discharged without cause within a period of one year.

It is obvious that sometimes disputes will arise between

a returning veteran and his employer. You must remember that there will be some of these men coming back who have been through very severe fighting. Their nerves will have been affected; not that their minds will be off, but they will have to be adjusted to civilian life, and every consideration will have to be shown them. Those men deserve, I think, and I know you will agree, the utmost consideration when it comes to rehiring or reinstating them.

Upon the failure of an employer to reinstate a man in his former position or give him a like position, that man has a right under the law to institute suit in a Federal court to obtain his rights. These rights are created by law, and every case will have to be decided on the particular facts and circumstances surrounding that case. It would be impossible to give any blanket interpretation of the act, because the act will have to be considered in the light of the circumstances of each particular case.

PRESIDENT ROGERS: Commander, these men present today in all probability may have some questions on individual cases which will be harder to answer than the general run of questions coming up under the act. I think if they will ask questions of you they will probably get the answers. Can you give some of the individual cases that have confronted you in South Carolina?

COMMANDER BOYD: I have some questions which have been sent in by some of the textile mills in the state, and no doubt the same questions have arisen in some of the other mills. If you like I should be glad to go over some of them.

JOE C. COBB, superintendent and vice-president, Startex Mills, Tucapau, S. C.: A question—suppose you had a doffer in your plant who was pretty sure he was going to be called up and had been given notification that he would be called at a certain time. Suppose his time to be called was on Friday, and on Thursday in the middle of his shift he decided, "Well, I need a little time to get ready, and I am going to leave this job," and he just politely walks off the job. Is he entitled to re-employment when he returns?

COMMANDER BOYD: Well, the act says a man is entitled to his old job back if he leaves that job to enter the armed forces. Now, that man you just spoke of probably was a little inconsiderate in his action, but he did actually leave to enter the armed forces the next day. As I say, I am no judge, and I would not attempt to say how the courts might interpret that particular section of the act. But it would be my opinion that you would have to take into consideration the man's mental condition and attitude at the time. In other words, he realized he was going into the service, and you cannot much blame him for saying, "Well, the mischief with it; I am going in the service tomorrow." He probably did not realize what weight it would have on returning.

P. A. KAY, overseer of weaving, Easley (S. C.) Cotton Mills: Broadly speaking, wouldn't you say whenever a



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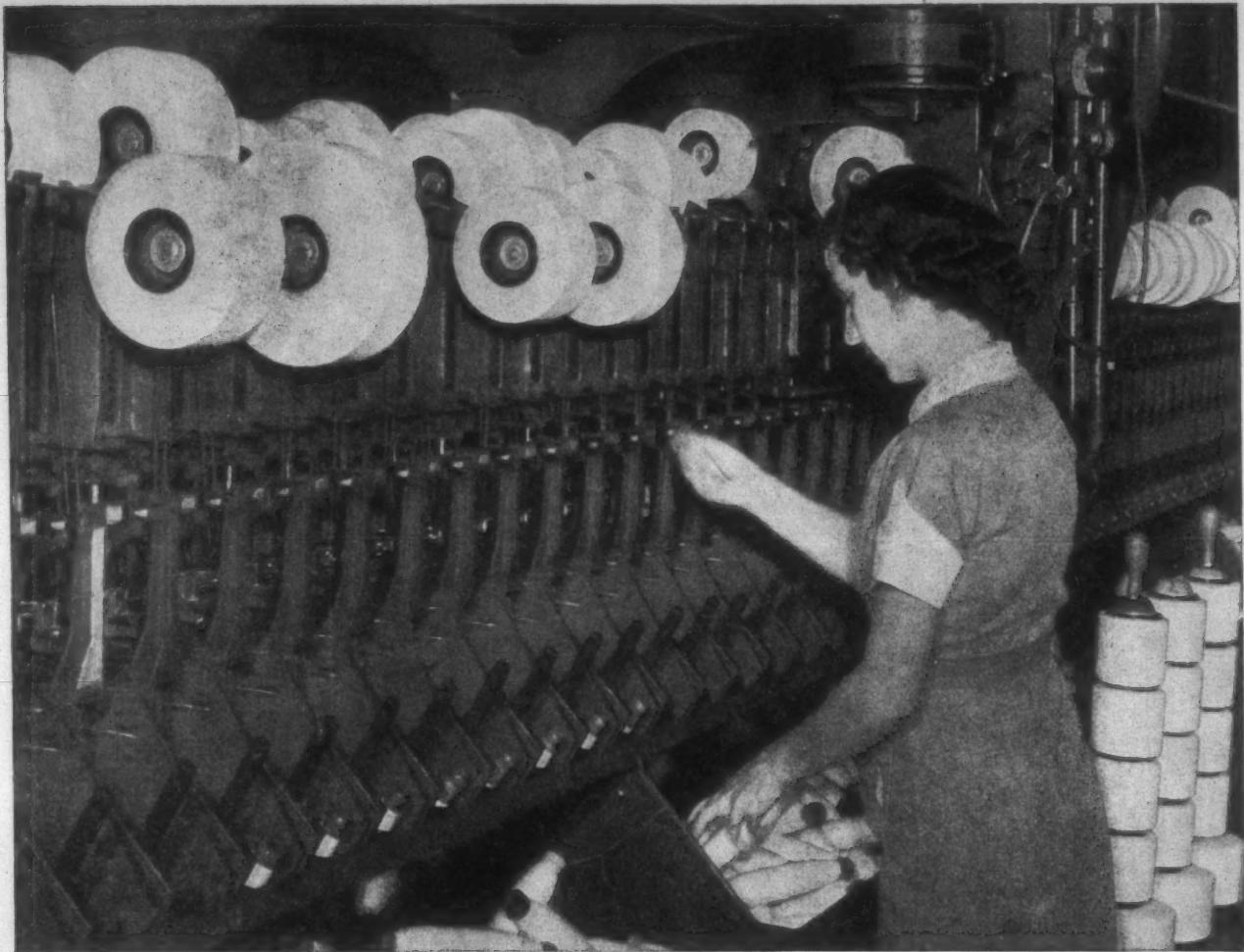
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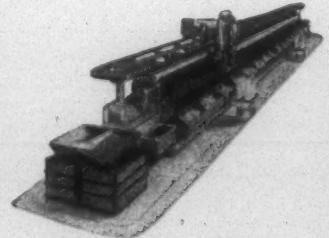


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man's induction is imminent we would probably find ourselves before the court, if it went that far, if we refused him that same position? If a man quits a week prior to his actual induction it still is certain that he has been passed and will be inducted on that day, and for all practical purposes he has been drafted from our employment.

COMMANDER BOYD: Yes, that sounds reasonable. Suppose a man left a mill and took another job for a short period of time. I do not think that man would be entitled to re-employment rights in the mill he first left.

Here is a mill that wrote in and said: "The party under consideration voluntarily quit our employ on Nov. 21, 1941, and filed claim for unemployment compensation, for which he collected benefits. On June 2, 1942, he re-entered our employ and voluntarily left a few months later, shortly before his induction into service." Certainly I do not think that man would have any re-employment rights. You have to look at it in a reasonable and sensible manner.

Resuming Corresponding Job Conditions

We had one question which was rather interesting to me, where a man was on a certain machine in a mill. He came back, and they put him on another machine. He said: "That is not the same old machine I had when I left there, and I want that machine." On first blush that seems like a rather arbitrary and inconsiderate attitude for a man to take. That was my first reaction to it, but on thinking it over it might appear that he had something there. Suppose the machine was in a part of the room with more air and light and that he got to that machine on account of his seniority. If that condition existed I would say that there would be some grounds for the man to demand his same old machine back. In other words, as I see it the whole purpose of the act is to put the man back, as nearly as possible, in the same status he was in when he left. If, of course, the machines were all the same and there was no difference in them, why it would be silly for a man to demand a certain machine.

We had another question from a mill which is a member of a chain. The company's officials wanted to know what happened if a man had been employed in Mill "A" and during his absence that mill closed down. That is just a theoretical question, because I do not think any of them are about to close down now. It is the opinion of Selective Service that the man would be entitled only to a job in the mill which he left, unless there were certain rules or customs, or agreements with the unions, or what not, that he would be employed in another mill of the chain if the particular mill in which he worked had closed.

H. H. BRADFORD, overseer of weaving, Anderson (S. C.) Cotton Mills: Suppose a man comes back and takes another job—takes up another kind of work. Suppose he works there, say, three weeks or a month and does not like that work and comes back and demands his former job.

COMMANDER BOYD: He has to apply for reinstatement within 90 days. As I see it, if he came back and took another job for 85 days and did not like that job and then applied for his old job within the 90 days, under the law I think he could get it.

J. B. BAKER, superintendent, Pelzer (S. C.) Mills: In connection with that question just asked, suppose the employee or the veteran returns to you within ten days after

his discharge and does not prefer to go back on his original job but would rather that you train him for some other job which he does prefer, and you agree to spend the money on him and you do that training in some special course; and suppose at the end of 30 days, after you have spent 20 days in training him, he then wants to go back to his former job, having changed his mind. Would you still have to give him back that job? If after that 20 days of training he prefers to go back on his original job, which he refused on his first application, what then?

COMMANDER BOYD: I think if he comes to you and goes into an entirely different kind of a job, say, a job for which training is needed, he is taking his chances there along with everybody else and he waives his re-employment rights under this act. That would be my guess.

MR. KAY: Would he waive that right if he went to some other plant and got a job? He might go to another plant and come back to you within the 90 days. The man who has originally agreed to try out for another job is in the same fix as the man who has applied elsewhere, isn't he?

COMMANDER BOYD: Yes. I would say that at any time within the 90 days he should come back.

GASTON GAGE, associate professor of carding and spinning, Clemson College: Would it be legal or possible for a mill to have, under the conditions as stated, some sort of form for the employee to sign, waiving his rights under this act, in view of the fact that he has accepted another job for which he has to be trained? Would that sort of agreement stand up, or not?

COMMANDER BOYD: I think any such agreement would be examined very closely by the courts to determine whether or not there had been any coercion or any advantage taken of the man to make him sign that. I do not mean that your mill would contemplate anything like that but am just trying to give you an idea of what might occur. A man, after he signed that, might change his mind and misrepresent the circumstances and allege that you attempted to make him forfeit his rights by signing the waiver. It would be good, however, if it were entered into in good faith by both parties, in my opinion; but I would say it is a rather dangerous instrument.

Ninety-Day Period Is Important

F. D. LOCKMAN, JR., assistant superintendent, Brandon Corp., Woodruff, S. C.: If a veteran returns and makes application for his original job and is offered it, then on the spur of the moment he decides he does not want it and later he comes back and re-applies for it, is the employer still liable? If he has been offered the job and has refused it once can he come back within the 90-day period and demand it and get it back?

COMMANDER BOYD: I would say he would not be entitled to it, for this reason: He must be able to perform the job at the time he applies for reinstatement. As I see it, that means he must be ready, maybe not instantly but within a reasonable time, to go on that job.

MR. LOCKMAN: What I had in mind, and I think we all have some of it, is this—you hire a man and he never shows up for work. Maybe you hire a man today to come Monday, and perhaps he does not show up for two or three weeks. Then he returns and is told you do not need him.

COMMANDER BOYD: Well, sir, that is very likely one of

the problems you are going to have with some of these men. They will come back; and unfortunately, due to the way human nature is constituted, a lot of them are going to try to take advantage of the act. Human nature is just that way. In a case such as that you just mentioned I am inclined to think the court would probably protect the man, even though he dillydallied for some weeks. If he said outright that he did not want the job, then he would not be; but if he said he did and then came a week later I am inclined to think he would be eligible.

QUESTION: If a man applies and does not have the ability to do the job, what then?

COMMANDER BOYD: The law says he must be able to discharge the duties of the position. Of course, that is a question of fact, and the man should be given the break.

MR. A.: That is just physical ability, isn't it?

COMMANDER BOYD: That refers to ability to run the job.

MR. A.: You would not expect a man who had been out for two or three years to come back and run it with the same skill, would you?

COMMANDER BOYD: No, sir.

MR. A.: Doesn't that refer to physical ability rather than actual skill?

COMMANDER BOYD: Well, he would be entitled to a job of like seniority, status and pay if he cannot handle the job.

More Men Than Jobs

H. C. ESTES, superintendent, Inman (S. C.) Mills: What are you going to do when you have more men come back for a particular job than you have jobs? Suppose you have two tying-in machines and have had three men leave that job. What are you going to do if all three men come back?

COMMANDER BOYD: The first man who left the job has the first right when he comes back. The man who replaced him has the right to the next job, and the man who replaced the second one, if he was in your plant at the time, would go back to the lower job which he left. Now, suppose the first man went to the armed services and you went outside and employed a man to take his place, and that man went into the service and you employed another, and the third man went into the service. Those last two men would have no re-employment rights on that job because their positions, you might say, were temporary.

N. G. HARDIE, general superintendent, Gossett Mills, Anderson, S. C.: The men that were upgraded to that job would be entitled to jobs held before being upgraded?

COMMANDER BOYD: Yes, sir, that is right.

PRESIDENT ROGERS: Suppose the original tying-in operator was drafted and you upgraded a man in the mill for that job and he in turn was drafted and later another man was upgraded and he in turn was drafted, and suppose the last man called was an older man and was discharged from the service first. If he came back you would have to put him on the job from which he was drafted. Then suppose the first man came back. What would you do with him?

COMMANDER BOYD: I think he would take the older man's job, because he was the first man that left it.

A MEMBER: If a man came back and took his old job

and stayed on it a week and then decided he wanted to try something else but, before the 90 days was up, came back to you and demanded his old job back again, as I see it you would have to give it to him. Is that your interpretation?

COMMANDER BOYD: I believe so. In other words, I believe the courts will construe this act very liberally in favor of the veterans, realizing that they are coming back with the problem of readjustment to civilian life before them and it is going to be hard for some of them to settle down as soon as they come back. There is going to be periods in there when they have to be treated, you might say, with some sympathy and consideration.

DAVID CLARK: Suppose you fail to give a man a job and he enters suit and there is a decision against you. Do you have to give him his back pay then?

COMMANDER BOYD: I am glad you brought that up, because I overlooked that point, and it is a rather important one. I will just read from the act. It says: "Section (e). In case any private employer fails or refuses to comply with the provisions of Subsection (b) or Subsection (c), the District Court of the United States for the district in which said private employer maintains a place of business shall have power, upon the filing of a motion, petition, or other preparatory pleading by the person entitled to the benefits of such provisions, to specifically require such employer to comply with such provisions, and, as an incident thereto, to compensate such person for any loss of wages or benefits suffered by reason of such employer's unlawful action." Now, that particular clause, as I see it, might have dangerous potentialities, as you will probably find after the war. Suppose a man comes back and refuses or fails to take his old job. He applies to you and you give him another job, and he makes nearly as much, or maybe more. Can he come in and sue you for all the wages which he would have earned from the time he applied to you for reinstatement and the time you were made to give him his job by the court? There is some opinion that you are due to pay him all of his back wages. Personally, I do not agree with that, for the reason that one of the elemental principles of law is that a man must do everything to mitigate his damages. If he has another job, he has no loss of wages. As I say, there are two opinions on that. If he came back and applied to you for reinstatement and was not able to get a job, then, of course, under that law he would probably get a judgment against you for that period of time during which he was out of a job.

MR. LOCKMAN: If you refuse him a job he is not compelled to look elsewhere, is he? He can just take it easy.

COMMANDER BOYD: I do not know. Of necessity, the law is broad and general. It cannot take care of every case that might arise. It is just my personal opinion that a man would be only sensible to try to get a job somewhere else.

MR. CLARK: The law does not require them to make application in writing, does it? Thus there might be a dispute as to whether a man had really applied.

COMMANDER BOYD: That is so. So it might pay you to keep good records.

MR. GAGE: Suppose a man decides to accept a year's training under the G. I. "Bill of Rights." Does he automatically waive his priority on the job he left? It would run past his 90-day period.

COMMANDER BOYD: I would say he does. He has 90 days from the day he leaves the service. You see, the act says "makes application within 90 days" of the date he leaves the service. General Hershey, the national director, has announced the policy. He says a veteran is entitled to reinstatement, and that the term "immediate," however, must not be understood in the literal sense of "instant" but rather as meaning without unnecessary delay. That would be just a question of reasonableness, to be considered in each case. There might be some good reason why you would not put him on today but could put him on next week. Of course, I do not think you could wait until the 89th day, arbitrarily, to put him to work.

THOMAS NELSON, JR., Penick & Ford, Ltd., Inc., Charlotte: Doesn't the law state he must have an honorable discharge from the Army?

COMMANDER BOYD: The blue discharge gives no re-employment rights. That is for misconduct or for some other reason.

E. L. RAMEY, superintendent, Riverdale Mills, Enoree, S. C.: Suppose you had a man who was on the third shift and while he was in service you discontinued that third shift and when he comes back you are running but two?

COMMANDER BOYD: I think in that case you would have to consider these facts. Was the man a regular employee of yours, or had he just been taken on temporarily to operate the third shift?

MR. CLARK: If you do not have a third shift you cannot re-employ him.

COMMANDER BOYD: I don't know about that, Mr. Clark. I think it would depend upon whether the man had been a regular employee of the mill. Let's suppose you have a section man who has been with your mill for 20 years, and you put on a third shift. You have to have some of your experienced men to operate that third shift, so you take him and put him on it. You have that key man on the third shift and fill it in with extra men. It seems to me that a reasonable construction of the act would mean that a man such as I have just mentioned would be entitled to his re-employment rights.

A MEMBER: Suppose the mill has a definite policy of promoting from the third shift. Suppose a man is drafted from that shift and returns from service. Are you doing the proper thing in offering him his third shift job? If he had not been drafted it is reasonable to suppose that he would have been on the second shift or the first shift.

COMMANDER BOYD: This is not the law I am reading

from but certain policies announced by the director of Selective Service for the guidance of Selective Service boards and others engaged in the administration of the act. He says: "Seniority rights accumulate during the period of active military or naval service. Time is credited in the same manner as it would have accumulated if the person had remained in his civilian occupation. Where a position has been upgraded the returning veteran, in order to claim reinstatement in such position, must be qualified to perform the duties of that position. If unable to qualify for the upgraded job he is nevertheless entitled to a position equal in seniority, status and pay to the one he left." That does not answer your question. During the period he was in the service he is considered to be on furlough or leave of absence. His status when he returns would be governed by your rules or regulations or the custom prevailing at the time he left, as to what seniority rights he would obtain while on leave of absence.

GEORGE W. McCALL, Pelzer (S. C.) Mills: Suppose you have a man who quits you and asks for a release. You deny the release, and he cannot get another job for 60 days. Thirty or 40 days after leaving you, however, he joins the Army. Are you obligated to this man if he comes back?

COMMANDER BOYD: That would depend upon whether he left your plant to go into the service. Apparently he did not; he became dissatisfied and quit. Is that your idea?

MR. McCALL: It seems to me I have seen somewhere that if an employee leaves you and has any idea of joining he is considered to be entering military service. In other words, suppose he says that when he left it was his intention to join the Army all the time.

COMMANDER BOYD: If he left your employ with the intention and for the purpose of joining the service, then I think he would be entitled to the job.

MR. McCALL: Well, he really left for a release, but he did not get it. He can say he left to join the Army.

COMMANDER BOYD: Well, that would be a question for the court to decide, if it got that far. It would be just like a jury's trying a case, as to whom will be believed.

A MEMBER: If you did not give him a release you kept him from working anywhere else, and I expect you would do well to give him a job when he gets back.

Weaving Discussion

F. D. LOCKMAN, JR., In Charge

CHAIRMAN LOCKMAN: I think most of you men have a little card with the questions printed on it, and you can use that as a guide. The first question is: "What results have been obtained by using other than wool covering for slasher rolls?" I think most of us use wool. Is there anyone here who does not use wool as a slasher-roll covering?

J. L. DELANEY, Joanna Textile Mills Co., Goldville, S. C.: We use a cotton blanket of our own manufacturing. It has been written up several times in trade journals. It is made up of very heavy yarns, 1½/s yarn, warp and filling. When we first put it on we ran it unbleached. We have a piece of our regular shade cloth, and we used it on the front roll and the back roll. Later we found that if we bleached that yarn we got a much better cushion and much better slashing. We have been—(Continued on Page 56)

Caughman Heads South Carolina S.T.A.

Upon conclusion of the Southern Textile Association's meeting at Clemson College Nov. 11, John M. Caughman was named chairman of the South Carolina division, succeeding W. W. Splawn of Pelzer, S. C. Mr. Caughman is general superintendent of Spartan Mills at Spartanburg, S. C. Newton G. Hardie, general superintendent of Gossett Mills at Anderson, S. C., was elected chairman of the weavers' section, South Carolina division.

WAKE FOREST, N. C.—Attorneys for Royal Cotton Mill Co. have filed an answer to a suit instituted Oct. 21 by Willis Smith, Mrs. Anna Lee Smith, and Mrs. Mary Creecy Smith, stockholders, in which the plaintiffs asked that a receiver be appointed to take over the properties of the mill and to operate the business.

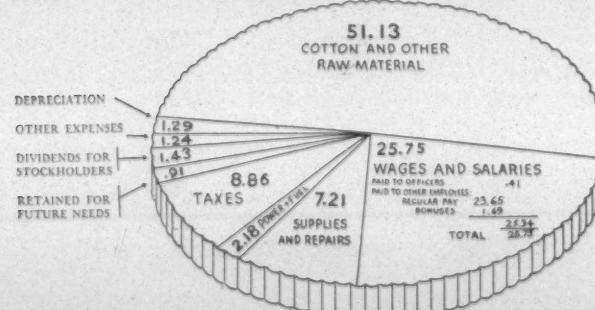
DANVILLE, VA.—In conjunction with its current consideration of the textile industry sub-standard wage case before it, a group of the National War Labor Board members visited Riverside and Dan River Cotton Mills to study various operations connected with the industry. These mills were selected for the survey because they are considered "neutral" territory since they are not involved in the pending case.

FRONT ROYAL, VA.—Initial production of high-strength rayon tire yarn has commenced at the new unit of the American Viscose Corp. Front Royal plant. Current output is small but is expected to increase gradually until full production is reached, probably around the middle of 1945. The new unit at Front Royal, constructed by government order, will produce approximately 57,000,000 pounds annually of high strength rayon tire yarn when in full operation. This, added to the plant's previous output, will make a total production of approximately 82,000,000 pounds a year of this critical war material.

ELKIN, N. C.—Approximately 92 per cent of the Chatam Mfg. Co. employees have signed up for the war bond payroll deduction plan to make the company eligible to fly the Treasury Department's Minute Man Flag. It is expected that the 2,380 who have already been signed up will be joined by others.

SYLACAUGA, ALA.—A recent special edition of the *Avondale Sun*, published here for employees of Avondale and Cowikee Mills, was dedicated to B. B. Comer, founder of Avondale Mills. The complete and interesting edition was issued on the anniversary of Mr. Comer's 96th birthday. Included in the publication is a speech which Mr. Comer, former governor of Alabama, made at Auburn.

WHERE THE AVONDALE MILLS' DOLLAR WENT LAST YEAR



In an effort to make clear just what disposition is made of company income, Avondale Mills of Sylacauga, Ala., recently published the above drawing in the "Avondale Sun." The drawing was based on facts derived from examination of the mills' books.

BARNESVILLE, GA.—The Binford Construction Co. of Thomaston, Ga., has begun work on a building and remodeling contract in the villages of the Aldora Cotton Mills which will cost more than \$400,000. The construction firm has just completed a contract of approximately \$200,000 to enlarge the mills.

MOUNT HOLLY, N. C.—The Madora plant of the American Yarn and Processing Co. was the scene of an impressive flag-raising ceremony Dec. 8 when for the first time the Minute Man Flag, indicating 90 per cent participation in the payroll savings plan, was run up on the flag pole. The Madora plant was the first unit in the company to achieve 90 per cent participation but recently the Adrian, Woodlawn and American plants, as well as the main office and the maintenance and construction department, have reached that goal so that the American Yarn and Processing Co. is now 100 per cent entitled to the Minute Man Flag distinction.

YORK, S. C.—Anchor Rug Mills, owned and operated by F. T. Cloniger, J. C. Cloniger and J. P. Ehkes, is now producing approximately 3,000 rugs weekly. Rugs for bathroom and bedroom are manufactured at the plant in Rock Hill, S. C., and then brought to the plant in York for finishing.

TAYLORSVILLE, N. C.—R. S. Ferguson has sold the Liledown Mill to Brookfield Fabrics, Inc., which received a state charter this month. President of the new company is Clarence A. Ross of Gastonia, N. C., who will retain headquarters in that city. Other incorporators besides Mr. Ross are Cy Girard, Herbert Girard and S. R. Girard, also of Gastonia. At present the Liledown Mill, located three miles from Taylorsville, is operating 5,760 spindles on 21/1 to 36/1 cotton yarns. It is reported that the product will be changed to knitted fabrics some time in the future.

MOUNT PLEASANT, N. C.—The alleged refusal of A. N. James, operator of the Kindley Cotton Mills, to accept and fill rated orders for cotton yarns needed for the war effort, has resulted in issuance of a War Production Board suspension order directing him to deliver 62,876 pounds of cotton yarn on rated orders by the end of June, 1945, in excess of amounts required to be set aside by General Conservation Order M-317-b. The War Production Board charges that the cotton textiles manufacturer refused to accept or fill two rated orders for yarn early in 1944, and, instead, used the yarn he had on hand to fill orders with lower priorities, or bearing no preference ratings whatsoever.

GREENVILLE, S. C.—More than 600 fruit cakes weighing three pounds each have been sent from Dunan Mills to men and women in service, shipped to arrive in time for Christmas, and in addition about 10,000 cans of food were prepared by residents of the Dunan community at the Dunan cannery for shipment overseas.

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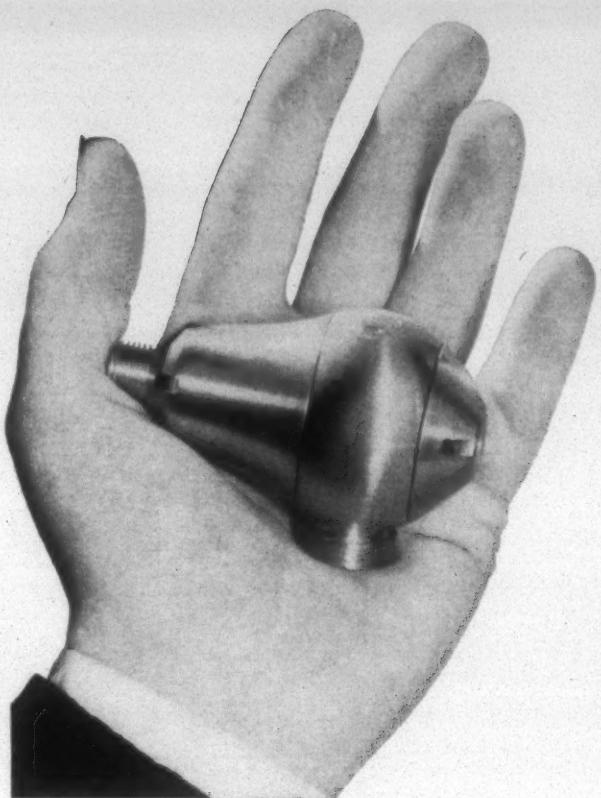
ALL KINDS OF TEXTILE
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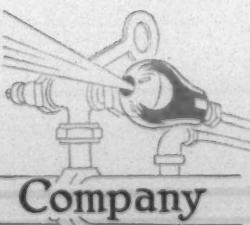
Humidifiers or Humidification

Where desperate need for moisture exists, anything labeled "humidifier" can hardly fail to help. Thus "humidifiers" sometimes get more credit than they deserve.

Mysterious looking objects delivering moisture and humidification have little in common. Humidification reckons with many things; the changing demand of the seasons, of each day, or hour, or minute. It includes peculiarities of plant, processes and product. Finally, it aims at more and better production.

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No piping changes. The Turbotmatic interchangeable with earlier and other models.



Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N.C.

Promotions, Resignations, Elections,
Transfers, Appointments, Honors,
Notes on Men in Uniform, Civic
and Associational Activity.

PERSONAL NEWS

In tribute to his 50 years of service, the management and employees of the Cone Export and Commission Co., New York, tendered a dinner recently to Saul F. Dribben, president. The company presented Mr. Dribben with a combination radio and phonograph, and employees made him the gift of an antique grandfather's clock.

Sam E. Owens, Jr., recently discharged from the Navy, has returned to St. Pauls (N. C.) Rayon Mills where he has been promoted to the position of superintendent.

John J. Bosshard has joined the fabric development department of the American Viscose Corp. He previously was a technician with William Whitman Co., Inc., of New York.

J. Edward Kale of Lincolnton, N. C., has been elected chairman of the board of directors of the Hampton Co. at Easthampton, Mass. Mr. Kale is president of Hampton Spinning Co. at Clover, S. C., and president and treasurer of Hall-Kale Mfg. Co., Troutman, N. C.

L. E. Fields, formerly with Columbus (Ga.) Mfg. Co., is now overseer of weaving at Plant No. One of Cowikee Mills, Eufaula, Ala.

WITH THE MILITARY—Pvt. M. L. Brackett, overseer of drawing-in for Highland Park Mfg. Co., Charlotte, until entering the Army last May, was wounded last month in Germany. He has been sent to England for hospitalization. . . . Capt. Robert F. Jenkins, who until he joined the Army about three years ago was in charge of the chemical laboratory of Rock Hill (S. C.) Printing and Finishing Co., received a shrapnel wound Nov. 9 in France. He has been awarded the Order of the Purple Heart and the Combat Infantryman's Badge for exemplary conduct in action. . . . Lieut. Richard H. Heineman, son of the late Percy Heineman, who was a member of the firm of M. Heineman & Co. in New York, has been awarded the Distinguished Flying Cross and Oak Leaf Cluster to the Distinguished Flying Cross and the Air Medal with three Oak Leaf Clusters. Lieutenant Heineman has been missing in action since May 22, and in his absence the awards were presented to his mother, Mrs. Charlotte Heineman. He is a cousin of Bernard Heineman of Heineman & Seidman. . . . Cline M. Hendricks, son of Maurice Hendricks, general manager of Cliffside (N. C.) Mills, has been seriously wounded in action in western Europe. He is now receiving treatment in an Army hospital.

R. T. LeGrand, Jr., has succeeded the late C. C. Blanton as president of Shelby (N. C.) Cotton Mills. Mr. LeGrand joined Shelby Cotton Mills in 1914 as superintendent, and until the present time has been secretary and assistant treasurer.



Maj. Stuart W. Cramer, Jr., left, president of Cramerton (N. C.) Mills, Inc., has returned to this country from an inspection of the European theatre of operations sponsored by the National Association of Manufacturers. Major Cramer was accompanied by five other N.A.M. members. On the tour he was able to renew personal acquaintances with a number of high-ranking Army officers who were fellow students at West Point. Upon returning to New York the textile manufacturer told the National Association of Manufacturers, which met Dec. 6 and 7, that Allied material shortages were quite evident in Europe and that industry has a long way to go before resuming peacetime activities. Major Cramer is first vice-president of the American Cotton Manufacturers Association and is in line for election to the presidency of this organization when it meets this spring.

Donald K. Woodard has been elected vice-president and general manager in charge of yarn and fabric manufacturing at the New England Mills of Textron, Inc.

Norman Earl Smith, assistant athletic coach at Gastonia (N. C.) High School, has resigned that position to accept a recreational post with Marion (N. C.) Mfg. Co. He will supervise a program of recreational and community activities.

George J. Schatz, Harold Bick and Anthony J. David have been elected assistant secretaries of Commercial Factors Corp., New York, effective Jan. 1. Mr. Schatz, 51, has been with the company 34 years and is well known in the Worth Street market. Mr. Bick is 47 and has been with Commercial Factors Corp. for the past 15 years, during which time he has headed the division extending credit to the retail trade. Mr. David is 42 and is now celebrating his 25th year with the company. He will continue in charge of the ledger department. Commercial Factors Corp., one of the leading organizations in the factoring field, is a wholly-owned subsidiary of Commercial Investment Trust Corp.

Frank G. Revels has recently been promoted to overseer of weaving at Steele's Mills, Rockingham, N. C.

W. H. Belk of Charlotte, head of a department store chain, has been elected president of Quaker Meadows Mills, Inc., at Hildebran, N. C. He succeeds Bascom Blackwelder, who has been named vice-president, treasurer and general manager by the stockholders. Horace C. Lutz has been made a vice-president and M. E. Newton continues as secretary.

Several promotions at Union Bleachery, Greenville, S. C., have been made known by R. W. Arrington, president. The changes become effective Jan. 1. H. R. Mathewson, formerly superintendent, becomes general manager, a new position, and C. Percy Gregory, Jr., who has been with the plant ten years, will be assistant general manager. Edward S. Tillinghast, present assistant superintendent, is moving up to superintendent, with Leonard W. England, now head dyer, as his assistant. George W. Speer, Jr., present assistant dyer, is being promoted to dyer, with R. W. Price as his assistant.

K. C. Ellsworth, sales manager of the Link-Belt Co. stoker division, Chicago, has been appointed a member of the stoker manufacturers industry advisory committee recently organized to assist the industry in dealing with the Office of Price Administration.

Walter Danhoff, for the past five years superintendent of carding and spinning at Gaffney (S. C.) Mfg. Co., has been named assistant superintendent, succeeding J. H. Robbins, who resigned recently to accept a position with Riverside and Dan River Cotton Mills at Danville, Va. John Thompson of Burlington, N. C., has been appointed office manager at Gaffney Mfg. Co.

WITH THE GOVERNMENT—J. Spencer Love has resigned as director of the War Production Board's textile, clothing and leather bureau to return to his duties as president of Burlington Mills, Inc., Greensboro, N. C. Mr. Love, who has been with WPB for more than a year, has been succeeded by Kenneth Marriner, until now director of the bureau's wool division and assistant to Mr. Love. Benjamin Seiger will continue as deputy director. . . . Robert P. Kenney, who has been serving as chief of the vinyl resin unit of WPB's chemical bureau, has been appointed manager of international service for the chemi-

—(Continued on Page 43)

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TEXTILE BULLETIN

Member of
Audit Bureau of Circulations and Associated Business
Papers, Inc.

Published Semi-Monthly

CLARK PUBLISHING COMPANY

Offices: 218 W. Morehead St., Charlotte, N. C.

Eastern Address: P. O. Box 133, Providence, R. I.

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SUBSCRIPTION

One year payable in advance	- - - - -	\$1.50
Other countries in Postal Union	- - - - -	3.00
Single copies	- - - - -	.10

Contributions on subjects pertaining to textile manufacturing and distribution are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

The McLaurine Resignation

Until we have more information relative to the movement which led to the resignation of W. M. McLaurine as secretary of the American Cotton Manufacturers Association, we do not feel justified in discussing the matter.

We do know that being secretary of an association, such as the American Cotton Manufacturers Association, is a hard job and we feel that under the circumstances W. M. McLaurine has done very well.

The man who fills the position of secretary of a textile manufacturing establishment usually has the same president and the same treasurer for many years and becomes familiar with consistent policies and practices and can adjust his actions to them.

Every year there is a new president of the American Cotton Manufacturers Association. Each president has a different personality and to a large extent different methods of handling problems.

A secretary having gone through a year with one president and having adjusted his handling of problems to coincide with the president's views, suddenly finds himself at the beginning of a new fiscal year under a new president with somewhat different ideas and different policies.

One president likes to take the lead and enjoys the limelight while another president wishes to remain in the background and select leaders of the industry to make appearances before Congressional committees and to handle problems.

One president desires the secretary of the association to take the lead and to exercise authority where-

as the next president looks upon the secretary as a clerk and even resents his making suggestions.

Some presidents wish the secretary to advise them upon all matters while others seek outside advice and entirely ignore the official secretary.

One president has personnel relations as his hobby, another taxes and still another puts merchandising problems first. The poor secretary has to make the hobby of each president his hobby until a year rolls around and there is another president and another hobby.

It is but natural and to be expected that every president will be different in some measure from his predecessor and his successor.

We are not criticizing them for being different and recognize that there are some advantages in having them different, but we can see how the differences cause the secretary to lead a somewhat uncertain life and we can imagine that when Bill McLaurine mailed his resignation he heaved a sigh of relief and relaxed for the first time in 18 years.

The End of Another Year of War

As we come to the end of another year of war, we face the realization that the end of the conflict has not been reached and that it may extend throughout 1945 and possibly into 1946.

Nothing can be accomplished by wishing a "Merry Christmas" or a "Happy New Year" to those who have sons or brothers or other relatives upon the battlefronts because they stand in daily and hourly dread of the message which may come, but we can express to all in the textile industry a sincere wish for good luck and that the Germans and the Japanese may soon realize the futility of continuing the conflict.

American boys have been magnificent in the conflict which has been forced upon our peace-loving nation, and very few would be willing to come home until the job is done so well that their sons may not have to enter another world war.

The \$650,000 Mark Passed

With only 15 days to go before the end of 1944, donations to the North Carolina Textile Foundation, Inc., have passed the \$650,000 mark and if the small textile mills in North Carolina make liberal contributions on or before Dec 31, receipts will reach or exceed the goal of \$700,000.

Some mills whose fiscal year extends into 1945 will make contributions after Dec. 31, 1944, but it is hoped that the \$700,000 goal will be reached this year.

Whatever funds are received either this year or in the future will be invested in Government bonds, but both the principal and interest will be used over a

period of 20 years to supplement or provide in full salaries at the school of textiles at N. C. State College and thereby secure as teachers men who could not be secured at the prevailing salary scale of the college.

Recently a man, who is regarded by many as the most outstanding textile research scientist in the world and is certainly entitled to rank among those at the top, was employed as director of textile research and fabric construction.

He will not only assist textile mills with their problems but will train textile students for research work.

As there has been no such position in the school of textiles at N. C. State College, his entire salary will be provided by the North Carolina Textile Foundation, Inc., and this unexpected expenditure will make it advisable to secure more than \$700,000.

Due to the fact that the man is now engaged in assisting in the manufacture of certain important Army fabrics, which were developed under his supervision, his name must be withheld for the present.

During the post-war years the textile industry is almost certain to go through periods of stress and many mills are going to be forced to make radical changes in their methods of operation or their products if they are to survive.

During those periods the industry will need the services of well trained operating executives and will welcome all the textile research which can be provided.

Textile mills now have all of the orders they can handle and, with few exceptions, are operating upon a reasonable basis of profits.

It is very easy now to forget certain pre-war days when both orders and profits were difficult to obtain. For instance, many combed yarn mills who operated upon 50 to 60 per cent schedules for months at a time because there was not a sufficient demand for combed yarns, complacently ignore recent developments in synthetic fibers and the almost certainty that many of these fibers, or combinations of them, will replace combed yarns and reduce the demand for such yarns below that of pre-war curtailment days.

Because we firmly believe that days of extreme stress are to come and because we believe that textile research and better training for textile students will do much to prevent periods of operating losses, we have been behind the North Carolina Textile Foundation, Inc., and have persistently urged mills to make liberal contributions.

The editor of this publication has freely given his time to this movement without compensation and has paid his own traveling expenses.

The total expenditure in connection with raising the \$650,000 which has been received is less than \$90, which shows the basis upon which the funds have been raised.

As most mills are in high tax brackets, the actual

cost to many firms which make donations will be less than 15 per cent of the donation and in some cases less than six per cent.

When a mill can invest \$5,000 in the training of better operating executives and in more textile research at a cost of \$250 or less to the mill, it is no time to be economical.

Donations made after Dec. 31, 1944, cannot be deducted upon 1944 income tax returns and there may never be another year when an investment for the good of the industry, including the mill making the donation, can be made at such a small cost.

We feel certain that a few years from now every mill which makes a donation to the North Carolina Textile Foundation, Inc., will be proud of the fact that it did co-operate in this important movement.

Shortage of Shells

We have noted with both interest and surprise, many statements about a shortage of ammunition upon the front in western Europe, one person interviewed going so far as to assert that some of the big guns whose effectiveness was badly needed had to be rationed to two shots per day.

We do not understand why all of these "ammunition shortage" statements are being circulated nor as far as we have read have any of those responsible for the statements explained why there is a shortage if one does actually exist.

Any 15-year-old boys knows that keeping an army supplied with food and weapons is just as important as keeping it supplied with well trained soldiers.

Some months ago, it was announced that the supply of steel was greater than the needs of the armed forces and some was released to civilians.

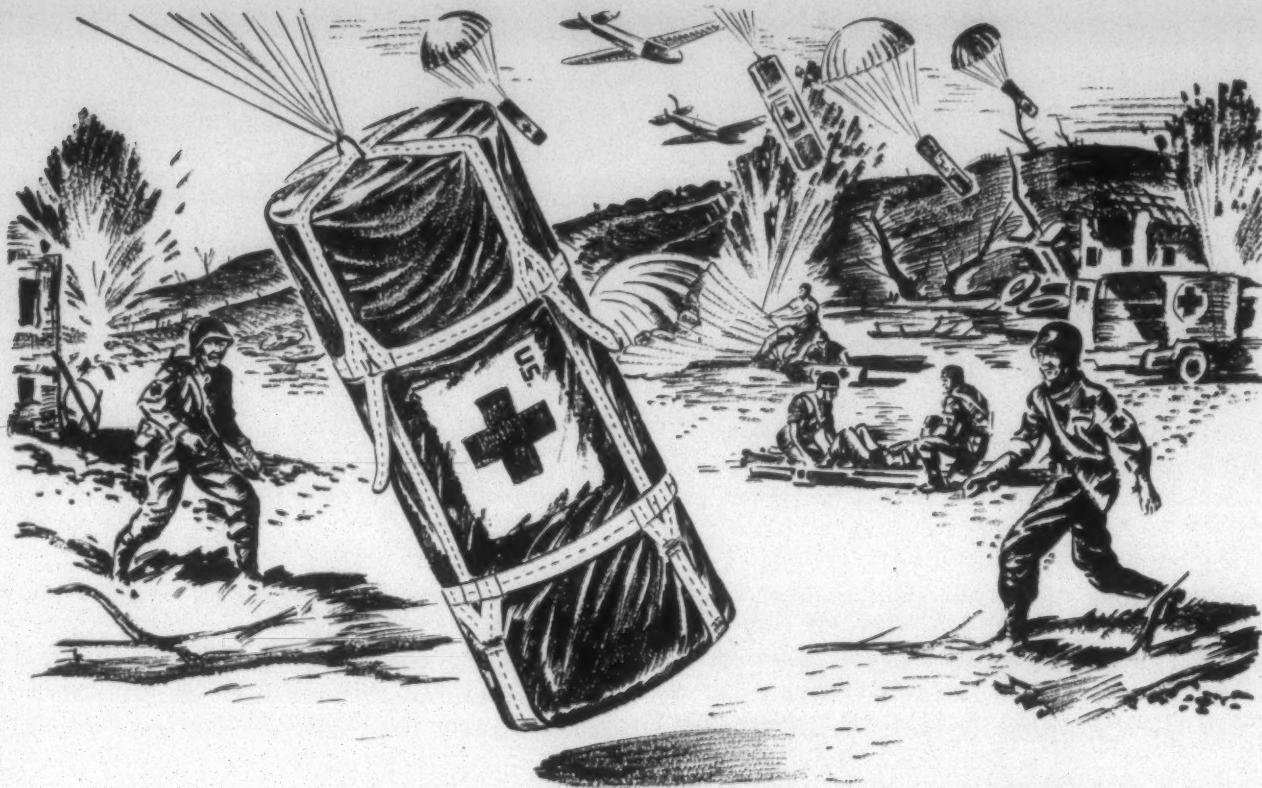
There has been some stoppage of munition plants due to labor union activities but in recent months such stoppages have not been frequent and we doubt very much that the blame for a lack of shells for big guns can be laid upon organized labor.

If there is a real shortage of shells, we can see no one to blame except high ranking officers in our armed forces.

Strangely enough, most of the statements about ammunition shortages comes from Army men, many of them the very persons who are charged with the duty of seeing that a full supply of ammunition is available.

Our system of military education must be deficient if those who receive it cannot handle supply problems and our boys are allowed to die because they do not have sufficient shells to wipe out German artillery.

Statements about shortages of ammunition should give the reasons for the shortage and place the blame upon those who, because of neglect or inefficiency, are responsible.



Complete Field Hospitals Delivered by Air

Paratroopers land far behind enemy lines . . . Next come para packs—some marked by a red cross. These Medical Rolls contain complete supplies for aiding the wounded. The outer shell of the Roll is made of O. D. osnaburg, a hard texture, heavy cotton duck. Over each end are cotton duck end caps reinforced by Cotton Webbing straps. The Medical Roll has capacity for aerial delivery of a 300-pound load, and can be released from bomb shackles or thrown overboard. A static line opens the parachute automatically.

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Mills making fabrics for our Armed Forces depend on Butterworth Machines at every step in the Wet End of Textile Finishing . . . bleaching, boiling-out, drying, calendering, dyeing.

Butterworth Engineers freely offer their cooperation to every mill seeking increased productive capacity . . . to develop new machines to meet special problems . . . to improve plant layout.

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DYEING AND FINISHING

Notes on Dyes and Dyeing

By GEORGE BROUN

Practical Application of Direct Dyestuffs—Part Eight

Readers may refer to the fifth, sixth and seventh parts of this series for information relative to the dyeing of directs on piece goods. The chief use at present of direct colors for print goods in dyeing of selected direct, direct and aftertreatable, and direct and developed colors that are dischargeable to a clear white. The usual formulations carried out for preparations of cotton and rayon will be covered in this installment.

THERE are two distinct methods used for direct colors on prints—direct printing of direct colors, and discharge printing of direct colors. Direct printing is utilized when the chief property desired is color solubility and good all-around fastness. This method is seldom used, however, since direct color prints have generally been replaced by colors with better wash-fastness.

A customary formula is made up with one to four parts of direct color, five to ten parts of gum trag or suitable vegetable print gum, 60 to 75 parts of water, two to four parts of hydroscopic agent and two to four parts of disodium phosphate, made to volume with necessary addition of water. The direct color is dissolved to insure high solubility, using 0.25 per cent soda ash or trisodium phosphate. After water has been used to dissolve color, then stir in printing gum thoroughly and add hydroscopic agent. To insure thorough solution this mix is heated, and as it cools add the disodium phosphate solution. When the cooled paste is strained it is then ready for printing. Cooling of the paste may be stepped up by the addition of other agents such as urea or albumin.

Generally, in handling of direct printed goods, a 45 to 90-minute ageing in a steamer (with two to five pounds pressure) is given. Upon removal from steamer the goods are washed at 90-110° F. in a bath containing mild soap or fatty alcohol in order to get rid of printing gum prior to finishing. One of the catonic softeners and aftertreating agents can be used advantageously in this final rinse water, but the bath should be at a pH of approximately seven and prepared with a fatty alcohol free from alkali. The use of a catonic agent assists in preventing bleed-offs of the direct color print. It also helps to improve cold water fastness and gives the printed goods a soft feel, allowing direct finishing without the use of additional softening agents.

Direct and developed colors satisfactorily dischargeable with a straight prepared discharging paste or vat color

carrying paste include directs, aftertreatable directs, and direct and developed. There is some difference of opinion as to the best type of paste for a straight white discharge on direct dyed goods, though the usual procedure is based along these lines with slight variations for different constructions and content of goods. Neutral print paste of the standard type is used with the addition of 20 to 40 per cent sodium sulfoxylate formaldehyde, although some printers prefer to add two to four per cent of anthraquinone paste to the mix to insure the cleanest and whitest discharge. Another change may be the addition of sufficient soda ash to the paste to give it a pH of 8.5 to nine.

Printers using slightly alkaline print paste for white discharge claim that they must discharge the direct color entirely whenever a vat-colored discharge is run; they logically contend that such a paste is alkaline and for this reason prepare it in that manner. Below find a range of the idea discussed, based on best practical printing results with cotton and regenerated rayon:

	No. 1	No. 2
Wheat starch—gum trag (heavy paste)	50	55
Water		
Sodium sulfoxylate formaldehyde (dissolve at 120° F., cool and add to paste)	25	25
Zinc oxide (dissolve 1:3)	10	10
Hydroscopic agent	3	2
Anthraquinone		3
Alkali	2	..
Water	10	5
	Parts 100	100

The vat colored discharge prints are usually run on pastel backgrounds so that the heavy vat print will be predominant. After the goods are printed with the discharge paste they are aged for two to six minutes at 218° F. To prevent the wet direct colors from bleeding off while goods are being oxidized it is advisable to employ a rinse bath containing a catonic color fastener. Some of the catonic agents found useful for fixing the direct colors during the various wet processing operations are, in alphabetical order, Aquaperm, Culofix, Fastogene, Lyofix DE, Maproset, Solidina, Soromine BS and Triton K-60.

On vat color discharge prints, the direct colors being pastel shades, the goods are usually given a hot soaping off without noticeable loss in shade, depending on the fastness of the direct colored background. Until recently a majority of the better quality direct discharge printing employed

selected direct and developed colors giving dischargeable whites, but with the now increased range of directs after-treatable with formaldehyde which are offered to the trade this latter type has come into extensive use. Some of the leading brands of this direct color are, in alphabetical order, Azoform, Benzoform, Calcoform, Carbide, Erieform, Formal, Formanil and Polyform.

Piece goods dyers who handle both rayon and cotton goods can obtain full information on these colors by contacting their manufacturers. It is always advisable for a dyer running solid shades which must be given a white or vat color discharge to run tests on their color formulas first, in order that he may know definitely that they are suitable for discharge printing. If the piece goods plant which dyes solid shades does not have a laboratory printing machine it is best to check the colors as follows: (1) Dye goods with swatch of acetate rayon in bath, and if the colors do not stain the acetate then run a stripping test; (2) After alkaline hydrosulfite stripping bath at 140° F., the dyed shade should be stripped white for the color to be suitable for discharge print; (3) then dye up sample yardage of cloth and send it to print works or some nearby dyestuff manufacturer's laboratory for a discharge print test.

In a number of cases dyers and printers have shown the writer that shipments of dyestuffs which usually give excellent white discharges will come up with a light stain that cannot be cleared up even with a sulfoxylate increase of 50 per cent. The only thing a printer can do under these circumstances is to add some titanic oxide whitening to the finish so as to cover up the dirty stain on discharge. Careful checking of color shipments showing poor discharge will show that these colors stain acetate noticeably, while similar colors giving good white discharges do not. The textile chemist's answer to this complaint is that the colors causing trouble have enough basic colors in them to cause the staining and poor discharge.

A patent covering a fabric treatment with metallic soaps has been granted Harold Schiller, Los Angeles, Cal., and assigned to Socony-Vacuum Oil Co., Inc., of New York. It covers a "treating solution for fibrous materials, comprising: a heavy metal soap of soap forming organic acid; water; ammonia in quantity sufficient to produce solution of said soap in said water, and a quantity of an alkyloamine sufficient to delay the precipitation of said soap, which otherwise results from the evaporation of the ammonia."

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Rayon Percentage Available To Mills Reduced By WPB

Textile manufacturers will be eligible to receive only 69.7 per cent of the rayon yarn which they need as a replacement for silk and nylon poundage in January, the War Production Board announced earlier this month in issuing Direction One to General Preference Order M-37-d. This direction limits a plant to the receipt of 82 per cent of his current monthly eligibility for rayon yarn. The current eligibility rate is 85 per cent.

The action was interpreted by WPB as "balancing the books" and distributing the available supply of rayon in an equitable manner. It was pointed out that the current eligibility has heretofore been figured against the basic monthly poundage and has varied from 100 per cent to as low as 70 per cent, according to the amount of rayon available. The present direction for the first time computes the amount of yarn that can be delivered against the current monthly eligibility rather than as a percentage of the basic monthly poundage.

The War Production Board, in an amendment to General Conservation Order M-356 Nov. 15, increased from four per cent to five per cent the amount of viscose and cuprammonium rayon yarns which must be set aside for export. There was no change in the amount of acetate yarn which must be set aside, this remaining at four per cent. These percentages of rayon yarn for export must be set aside by each producer of fine rayon yarn regardless of preference ratings, and must be five per cent of the producer's active spindles producing viscose or cuprammonium yarn and four per cent of his active spindles producing acetate. The number of active spindles producing high tenacity tire-type rayon yarn are not included in computing these percentages.

In announcing the increase for export of viscose and cuprammonium yarn the WPB stated that the increase was due to larger export requirements. Part of the increase in export yarn, it was reported, would go to Russia, while part would be used to clear up a backlog of Latin-American orders. It was also reported that other countries, such as Turkey, Egypt and Australia, were making representations to our government for supplies of rayon yarn. Subsequently it was made known that the Foreign Economic Administration had allocated to the Russian Government one million pounds of American rayon for the five-months' period beginning Nov. 1, 1944, through March, 1945.

It has also been reported that the WPB officials stated that regular allocations of rayon yarn and staple fiber to other countries amount to approximately 3,000,000 pounds for the remainder of this year and the first quarter of 1945.

In another M-37-d change, OPA has restored provisions channeling viscose and cupra rayons to the yarn-dyed silk woven goods trade, in effect limiting other rayon weavers to yarn in the six per cent acetate set-aside.

The Baker and Adamson Division of General Chemical Co., New York, recently published a 188-page catalog of its line of laboratory reagents and fine chemicals. Copies of the catalog may be secured from the main office at 40 Reckitt Street, New York 6, N. Y., or by addressing either of the Southern sales and technical offices, 29 Haynes Street, Atlanta, Ga., and P. O. Box 970, Charlotte 1, N. C.

PERSONALS

(Continued from Page 36)—

cal division of B. F. Goodrich Co. . . . Malcolm B. Catlin has been assigned to the WPB textile, clothing and leather bureau as special assistant to Mr. Marriner. . . . Bernard Heineman, a partner in the textile brokerage firm of Heineman & Seidman, New York, has replaced Philip Johnson as head of the finished goods section, textile price branch of the Office of Price Administration's consumer goods price division.

. . . It is reported that Luther Hodges, price executive of OPA's primary products branch, has resigned and is to be succeeded by Gardner Hawkins, his assistant. Mr. Hodges, with OPA for five months, will resume full-time duties as vice-president of Marshall Field & Co. in New York.

Carl C. Mattmann, Jr., head of fabric development for A. M. Tenney Associates, New York, has been named to the board of directors of the Philadelphia Textile Institute.

R. F. Redding has become superintendent of New City Mills Co., Inc., at Newton, N. C. He was formerly chief control engineer for the MMC Division of Callaway Mills, LaGrange, Ga.

Sgt. William B. Batson, son of Culver Batson, general superintendent of Chadwick-Hoskins Co. at Charlotte, has sent his parents two long hand-carved native spears from the Southwest Pacific area. Sergeant Batson joined the Army while a student at Virginia Polytechnic Institute and is currently attached to recently-cited ordnance unit.

T. C. Drew, formerly superintendent of Gaffney (S. C.) Mfg. Co., has become superintendent of Startex Mills at Tucapau, S. C., under Joe C. Cobb, vice-president. W. M. Allison, formerly assistant superintendent under Mr. Cobb, has been made superintendent of the Startex bleachery.

Wert B. Rhyne, secretary of Howell Mfg. Co., Cherryville, N. C., has taken over additional duties as treasurer of the company, replacing Carl A. Rudisill, who has resigned.

Morris S. Rosenthal, executive vice-president of Stein, Hall & Co., Inc., New York, will teach a course on fundamentals of exporting during the spring session at Columbia University.

Carl I. Taber, manager of fabric development for the acetate division of E. I. du Pont de Nemours & Co., has been nominated to the presidency of the American Association of Textile Technologists.

Tank Service Firm Opens Charlotte Office

Water Tank Service Co., specializing in maintenance of steel industrial equipment, has established Southeastern district offices in the Commercial National Bank Bldg., Charlotte. The

company, which has headquarters at Dallas, Tex., has appointed T. V. Altizer as manager for North Carolina, Virginia and West Virginia and G. E. Davis is in charge of the territory comprised of South Carolina, Georgia and Florida.

Company officials expect soon to obtain warehouse space in Charlotte and will bring to the Southeast skilled foremen to supervise field operations. Water Tank Service Co. has been in business some 20 years and is currently operating in 26 states.

Industrial Cooling & Moistening Co., Inc., successor to the firm of G.

A. White & Co., will continue to maintain offices and plant at 1440-44 South Tryon Street, Charlotte. R. C. Fink will be president and manager, and G. A. White continues as treasurer.

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- 2—H & B Twisters, 4½" ring, 5½" gauge, 120 Spindles each.
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Write "Box C-9,"
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Sellers and Southern Mercerizing Elected To Durene Association

Announcement is made by the Durene Association of America of the election of Sellers Mfg. Co., Saxapahaw, N. C., and Southern Mercerizing Co., Tryon, N. C., to membership in the association. Other members are Aberfoyle Mfg. Co., American Yarn & Processing Co., Dixie Mercerizing Co., Hampton Co., Clarence L Meyers & Co., Spinners Processing Co. and Standard-Coosa-Thatcher Co.

J. Burton Frierson, Jr., president of the Durene Association, welcoming the new members, briefly reviewed the progress made during 1944 and plans for the coming year.

Use of Durene identification on merchandise which has been subject to the new quality control program since January of this year, has increased 84 per cent, an especially notable figure in view of limited quantities of Durene yarn available for civilian goods. This program of quality control, under which the Durene trademark is licensed for use only on merchandise of good quality and workmanship which can meet performance tests of a qualified testing laboratory, has proved very successful, it is stated by licensees and retailers.

The new appearance standards which were added to Durene yarn quality specifications in January, 1944, are used by all members of the association. Over all checks of quality are also conducted by the association offices. For the latter purpose, yarn is purchased from "Durene" users and checked against approved standard by an independent testing laboratory. Coincidental with the large increase in Durene identification, a growing amount of retail store

advertising featuring advantages of merchandise of Durene has been recorded. Requests for sales training material have increased 75 per cent.

Mr. Frierson stated that the program of the association for 1945 will be focussed on the importance of controlled quality both of yarn and merchandise. He called attention to the fact that licensees are doing an outstanding job in supplying quality merchandise to the public in spite of yarn shortages and production problems.

A.A.T.C.C. Group Elects Myers Chairman

Frank Myers of Geigy Dyestuffs, Chattanooga, Tenn., was elected chairman of the South Central section of the American Association of Textile Chemists and Colorists at a meeting in Chattanooga recently. He succeeds Homer Whelchel of Central Franklin Process Co., Chattanooga. Other officers were elected for 1945 as follows: W. P. Clements, Kingsboro Silk Mills, Daisy, Tenn., vice-chairman; W. K. Newman, Peerless Woolen Mills, Rossville, Ga., secretary; Glenn Bellamy, Ciba Co., Chattanooga, treasurer; E. H. Dobbins, Trion (Ga.) Co., councilor; and Jack Anderson, Peerless Woolen Mills; R. W. Freeze, American Aniline Products, Inc.; A. J. Kelly, Burkart-Schier Chemical Co., and W. S. McNab, O. F. Zurn Co., sectional committeemen.

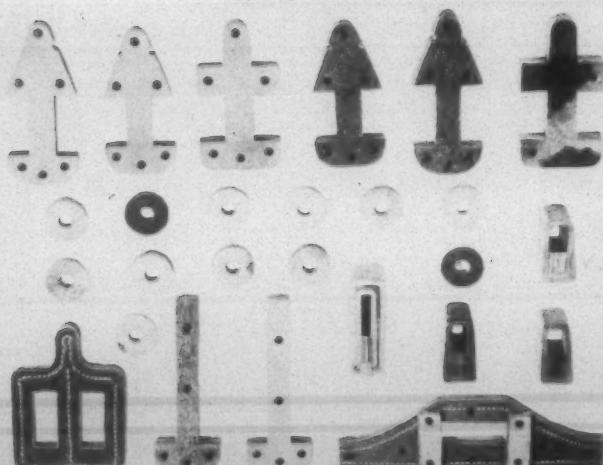
Movies of English Tour Are Shown

Motion pictures taken by Walter S. Montgomery, a member of the American textile mission which visited mills in England, returning to this country Sept. 18, were shown to a group of approximately 50 executives of cotton goods selling houses and mill men in the rooms of the Association of Cotton Textile Merchants of New York Dec. 8.

The films covered the experiences of the mission, with numerous views of mills in Lancashire together with scenes in other parts of war-torn England. Mr. Montgomery, who is president of Beaumont Mfg. Co. and Spartan Mills, Inc., at Spartanburg, S. C., described the films and spoke on conditions in the British cotton textile industry.

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The Place of Wartime Developments in Peacetime Textile Machinery

(Continued from Page 22)—appreciable. The equipment would cost several times as much as the conventional cam-operated picking mechanism. Furthermore, it would introduce difficulties when applied to box looms and to automatic looms of all types. Just how a multi-shuttle loom could be made with all the field windings, and how an automatic loom could be operated with a fin on the bottom of the shuttle is a question.

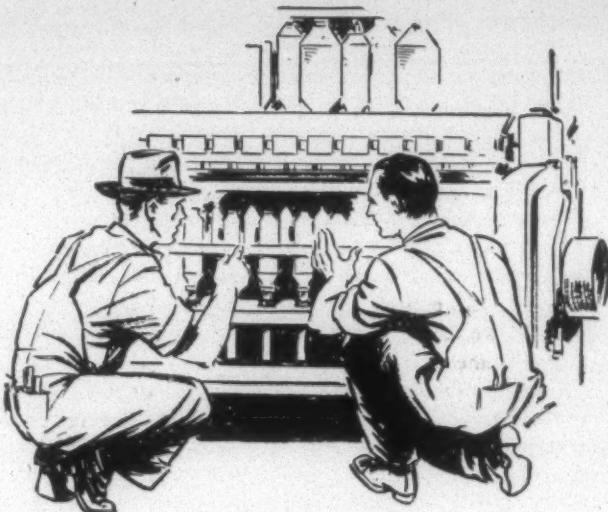
As we see the problem of the picking motion, there is only one approach to a possible solution: first, to learn all we can about it; second, to investigate all the possible solutions; and third, to concentrate on those that hold the most promise. In this endeavor we have been engaged in the accumulation of data for a number of years. Our first step was to make quantitative measurements relative to shuttle flight, such as: (1) weight of the shuttle; (2) time available for the acceleration of the shuttle; (3) distance in which the shuttle must be accelerated; (4) velocity of the shuttle required to carry it across the loom; (5) distance traveled by the shuttle; (6) time available for the shuttle to pass from one side of the loom to the other; (7) loss in shuttle velocity during flight; (8) residual velocity at the end of flight; (9) time available for stopping the shuttle; and (10) distance in which the shuttle must be stopped.

Our first attempts to obtain this information were not very successful. We were able to check our mathematical calculations only roughly until we applied the technique of high speed photography, of which Prof. H. E. Edgerton of the Massachusetts Institute of Technology was the pioneer. Now, however, we are completely equipped with high speed cameras and all the electrical equipment that goes with them—all designed and built by us, with the advice of Professor Edgerton and other qualified engineers.

With the information which we have accumulated we are in a position to investigate the various ways in which a shuttle may be propelled. So far we have discussed the problem with experts in electric, hydraulic, pneumatic and mechanical equipment that might lend itself to this mechanism. Frankly, we have not determined yet which general method offers the most promise. Everybody agrees that, although the matter seems simple on the surface, there are many difficulties to overcome primarily because of the large amount of power that must be made available in a very short interval of time. From the electrical standpoint, for example, the inherent time lag in building up a magnetic field of sufficient intensity and the short time that is available for doing so virtually eliminate that solution, at least until the effect of inductance which is present in any circuit involving windings of motors and solenoids can be overcome.

The field of hydraulics looks interesting. We have had meetings with several manufacturers who specialize in drives for machine tools and who during the war have developed many marvelous controls and drives for aircraft and ordnance equipment. Recently, the vice-president and director of engineering of one of these companies spent a day with us. He gave a great deal of thought to the facts that we presented to him and then wrote a report to his associates. He expressed the thought that hydraulic principles might be applied to a loom, but stated that in his opinion the cost of the necessary equipment would make it

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ATLANTA, GEORGIA

prohibitive, particularly when he could not see that it would accomplish anything beyond the operating results that now are obtained from mechanical devices. His final comment was: "One of the most important points to be considered in possible hydraulic mechanisms for looms is the very low selling price of the entire loom considering its complication and high state of development. A loom which I saw in operation is sold for somewhat less than \$1,000. From its general appearance and the mechanism involved, I would have thought \$3,000 a low price." The significance of this statement is emphasized by a proposal that we had from another company which went to the trouble of designing an hydraulic picking mechanism for a loom. They quoted a price of around \$600 for the parts. We sell the whole machine complete with its present picking motion for about \$900—and it runs as fast as it would with the proposed hydraulic picking motion.

These experiences make the endeavor to solve the picking problem a bit discouraging. Perhaps we shall fail in our purpose, as others have. However, we do not believe that we shall entirely, because by an organized, logical approach we cannot fail to realize something that will be an improvement.

A considerable amount of progress has been made in the improvement of other loom mechanisms. Increasing speed prompted this work. Motors became overheated, clutches wore. Stop motions and brakes became inadequate. For several years the loom builders and the two principal suppliers of loom motors could not understand what was causing these troubles. Motors that by laboratory tests had enough electrical capacity to carry the loom load which was shown by recording wattmeters, proved to be inadequate because they overheated. This fact led to a detailed examination of the situation by means of the recording oscillograph. Some of the results show that the load imposed on a motor by a loom is not a steady one, but widely fluctuating, with both positive and negative power peaks, some of which on the ordinary cotton or rayon loom amount momentarily to as high as three horsepower.

As the result of these electrical analyses, the motor manufacturers and the loom builders have been studying the flywheel effect and electrical slip in motors in relation to the flywheel effect of the moving parts of looms. We have dismantled our looms, have measured the flywheel effect of the moving parts, and have determined other important data, such as the weight of these parts, their center of mass, and their radius of gyration about some fixed center. We also have determined the velocity of the parts during the complete operating cycle of the loom. From these data we not only have been able to determine the required capacity of motors and clutches, but also the amount of energy that must be dissipated by brakes and stop motions when the loom is to be stopped. Already these facts have been utilized. Post-war loom drives and motors will be better than those that are in use.

One last important subject should be included here; namely, the field of electronics. Much has been said about the possibilities of devices that employ electronic tubes, particularly those that include the phototube or electric eye. Ever since the doors in the Pennsylvania Station in New York were arranged to be opened when passengers interrupted a beam of light, every textile man that has passed through the station has thought to himself: "Why can't we use that on our machinery." Some of us did try, but did not accomplish much because the first photoelectric relays were too slow. Thanks to electrical engineers and scientists, that situation has changed. Electronic relays now are available that are fast enough to be used on loom mechanisms, such as stop motions and filling detectors. But still they are not applicable in all cases, not because of any fault in them, but because of the inherent characteristics of the electrical apparatus with which they are used.

Fundamentally, an electronic tube is a device for controlling the flow of current through a circuit. It will "turn on" a source of power in a small fraction of a second in response to a very weak signal. That part of the device is excellent. The difficulty arises when we try to convert the power which has been "turned on" into usable mechanical

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energy for the purpose of applying a brake, changing a bobbin or actuating a clutch. To do this sort of work, a magnetic field must be created as, for instance, in a solenoid. Electricity unhampered will travel at approximately the speed of light, but when it is introduced into the windings of a coil it becomes involved with something that electrical engineers call "inductance." The effect is similar to that produced by the inertia of mass in a mechanical system. Perhaps it can be overcome, but at the moment inductance causes electrical circuits to be too slow for some of the operations which now are performed mechanically on looms.

Gradually the difficulties which hamper the use of new devices and materials in textile machinery will be overcome by changes in them and in the machines to which they are applied. The general adoption of any resulting combination will depend upon the degree to which the resulting price is justified by the resulting performance. Regardless of the outcome, much time, effort and expense will be involved in reaching decisions—all of which leads to the conclusion that though wartime developments have a place in peacetime machinery, they will not be available to the mills just as soon as hostilities cease.

November Rayon Shipments Increase

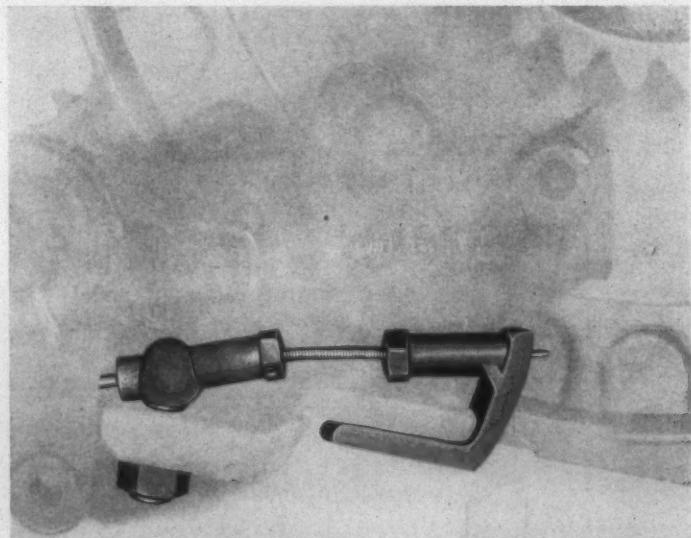
Shipments of rayon filament yarns to the domestic market aggregated 47,800,000 pounds in November, according to statistics compiled by the *Rayon Organon*, published by the Textile Economics Bureau, Inc. The total represents an increase of 800,000 pounds as compared with October pro-

duction of 47,000,000 pounds and is 4,900,000 pounds or 11 per cent above November, 1943, shipments of 42,900,000 pounds. Eleven months' shipments of filament yarn approximate 488,700,000 pounds as against 451,000,000 pounds in the corresponding period last year and indicate a total 1944 production of 536,500,000 pounds.

For November staple fiber production aggregated 13,800,000 pounds which compares with 14,500,000 pounds shipped in October, 1944, and 13,900,000 pounds shipped in November, 1943. Eleven months' shipments approximate 151,800,000 pounds as against 147,500,000 pounds shipped in the corresponding month last year. The estimated annual total staple fiber shipments is 165,500,000 pounds.

Stocks of rayon filament yarn held by producers on Nov. 30 totaled 8,400,000 pounds, according to the *Organon*. This is the same stock position as at the end of October but compares with stocks of 7,200,000 pounds Nov. 30, 1943. Staple stocks show a slight increase from 2,700,000 pounds Oct. 30 to 2,800,000 at the end of November.

The Lanaset treatment to control shrinkage of wool and blends of wool and other fibers is incurring much interest, according to R. E. Sumner, sales manager for American Cyanamid Co.'s Calco Division. "The response to the recent announcement of our melamine resin, Lanaset, has been beyond our expectations," Mr. Sumner states. "While we consider wool shrinkage control to be a major development in the textile industry, the change in its status from a post-war 'promise' to immediate availability is of great importance to the trade."



THE PIERCE BOBBIN LOCK MOTION (Patent Pending)

Prevents at least 95% of filling bobbin breaks on the transfer of the bobbins. Letters from representative Southern mills testify that it has reduced breakage even MORE than the percentage claimed.

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FILLING BREAKS



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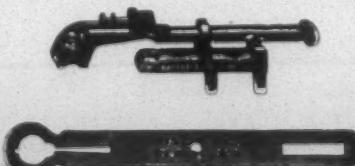
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Cotton Goods Market

All constructions of duck fabrics, in the gray, sold under contract to the War or Navy Departments are exempted from price control from Dec. 14, 1944, through March 13, 1945, the Office of Price Administration has announced. This 90-day price exemption period was established at the urgent request of the War Department, OPA said.

OPA has been told by War Department officials that an unusually large volume of duck must be procured during the 90-day period to meet military needs. Every means of speeding up the production and procurement of this fabric is being used, the agency stated.

Even though the exemption has been granted, it is understood that the War and Navy departments will, when making contracts at higher than present ceilings, use the same pricing standards and accounting methods as are used by OPA in granting individual adjustments.

A correlated effort to increase duck production was indicated in an Army plan to release skilled textile workers from its forces, announced Dec. 13 following a conference between Lieut.-Gen. Brehon Somervell, chief of the Army Service Forces, and a group of Southern senators.

Production of bleached finished cotton goods for the third quarter of 1944 totaled 751,986,000 yards compared with 818,502,000 yards for the second quarter, the Department of Commerce reported this month.

At the same time the department reported that production of plain dyed and finished cotton goods for the third quarter totaled 563,839,000 yards compared with 615,119,000 for the second quarter of this year.

Printed and finished cotton goods totaled 259,827,000 yards for the third quarter as compared to 301,951,000 yards for the second quarter.

Direction Seven to General Conservation Order M-317 has been issued, announcing a program to give priority assistance to wholesalers and retailers who buy directly from textile mills or converters to obtain certain kinds of cotton piece goods, the War Production Board has reported.

Cotton piece goods available in limited quantities for which distributors' priority assistance will be given are: print cloths (percale) in counts of 68x64, 64x56 and 60x48; plisse, 60x48; broadcloths, 80x60 and 100x60; lawn, 72x56; outing flannels; ginghams; seersucker (checks, plaids and stripes).

Speculation is already prevalent in the Worth Street market as to the conditions that may prevail in the second quarter of 1945. Some believe that at the end of the first quarter mills will be over the hump on production for the military, and thereafter more and more goods can be channeled to civilians.

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Cotton Yarns Market

Production of carded cotton sale yarn in the third quarter, July-September, of this year, totaled 156,246,000 pounds, compared with 172,315,000 pounds in the same quarter of 1943, and 156,364,000 pounds in the April-June quarter of this year, according to the joint report of the War Production Board and the Bureau of the Census, Department of Commerce, issued Dec. 15. Spinning spindles assigned to carded cotton sale yarn as of Sept. 30, this year, numbered 2,201,161.

Production of combed cotton sale yarn in the July-September quarter of this year totaled 53,702,000 pounds, compared with 61,351,000 pounds in the corresponding quarter of 1943, and 56,216,000 pounds in the April-June quarter of this year. Spinning spindles assigned to production of combed cotton sale yarn as of Sept. 30, this year, numbered 2,106,067.

The Census Bureau has reported that cotton consumed during November totaled 836,541 bales of lint compared with 795,379 in October this year and 858,877 in November last year. Consumption for the four months ended Nov. 30 totaled 3,266,496 bales of lint compared with 3,421,212 in the corresponding period a year previously.

Cotton spindles active during November numbered 22,257,040, compared with 22,615,732 in November of 1943. These figures were divided as follows: in cotton-growing states, 17,342,464 compared with 17,409,916 in November last year; in New England, 4,376,326 against 4,663,066.

The United States Agriculture Department reported Dec. 8 that its estimate of this year's cotton crop is 12,359,000 equivalent 500-pound bales. Acre yield is estimated at 295.3 pounds, the highest of record.

Production was forecast at 12,320,000 bales on Nov. 8. Last year's crop totaled 11,427,000 bales and the average production for the ten years 1933-42 was 12,455,000 bales.

Distributors in the Philadelphia market report that they are servicing only top-rated customers, with hardly enough yarns to take care of even this group. So tight has the market become that trading is on a hand-to-mouth basis, few orders being booked ahead as far as 30 days.

Sellers do not think production will maintain its pace after the holidays. They believe workers are putting in overtime to fatten pay envelopes for Christmas and will return to their old schedule after the first of the year.

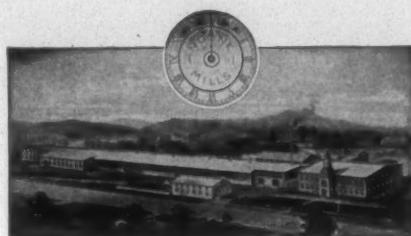
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Bright Future Seen for Standards

Stating that war has been making the whole country standards conscious, Henry B. Bryans, president of the American Standards Association, told executives of trade, technical and governmental groups gathered for the annual meeting of the association at New York Dec. 8 that he predicts a big post-war future for standards based on the vigorous leadership of free enterprise, teaming up with interested government agencies.

In his report on the technical work, H. S. Osborne, chairman of the standards council, said that of the 157 standards completed this year, 66 were handled under the emergency procedure established for war procedure. "Of these the largest number, 27, related to the safety of workers, principally in protective clothing and shoes," he stated. Speaking of the possible future field of work, Dr. Osborne mentioned practices for packing goods, the properties of plastics, textiles, the classification of commodities, definitions of technical or trade terms used in various industries or trades, and methods of testing to determine the effectiveness of protective treatment against fungus attack on materials.

Mr. Bryans reported that the following national groups have joined the A.S.A. during the past year: National Association of Finishers of Textile Fabrics, National Association of Wool Manufacturers, and National Association of Textiles. This brings the total membership to 85 national trade, technical and governmental groups. At the close of the meeting Mr. Bryans was re-elected for another term as president of the association.

Textile Color Card Association Meets

All officers and directors of the Textile Color Card Association of the United States, Inc., were re-elected when the 29th annual business meeting of the association was held at the offices of the organization, 200 Madison Avenue, New York, recently.

Charles Pinnell of the Merrimack Mfg. Co. continues as president, while other officers are: Roy E. Tilles, Gotham Hosiery Co., Inc., first vice-president; Armand Schwab, Armand Schwab & Co., second vice-president; Carl E. Kempf, Brewster Hat Co., treasurer; and Margaret Hayden Rorke, secretary and managing director. Members of the board of directors in addition to the officers are E. Irving Hanson, Hafner Associates, Inc.; Waldo Grose, Botany Worsted Mills; Allan C. Jacobson, J. P. Stevens Co.; W. R. McIntyre, Joseph Bancroft & Sons Co.; William B. Olmstead, Jr., American Viscose Corp.; Brainerd Pidgeon, Stunzi Sons Silk Co.; Alfred L. Simon, Osmite Co.; and John F. Warner, Riegel Textile Corp. As a feature of the meeting, an encouraging report of the association's growth was rendered by Mrs. Rorke.

Britain Develops New Synthetic Fiber

"Ardil," Britain's new patented synthetic wool-like fiber developed after ten years' experimentation with proteins from corticated ground nuts, will go into mass production as soon as the Board of Trade issues the necessary licenses. The Imperial Chemical Industries made this announcement in disclosing details of the fiber, which it characterizes as significant for post-war textile expansion. The report from London on this newest synthetic fiber indicates that E. I.

du Pont de Nemours & Co. has the option on American production rights.

"Ardil" is described as complementary to wool, rayon and cotton. When mixed with rayon and cotton, it is claimed, it changes the character of the final fabric by adding warmth, resilience and crease resistance, and results in lighter woolen fabrics when manipulated with wool. It has the tensile strength of rayon, is nearly like that of cotton, but weaker than wool. It is claimed that it absorbs moisture like wool and has a similar rate of wetting, is shrinkless, dyes like wool, and is mothproof. The price, the company says, is nearly half that of wool, and about equals that of cotton and rayon.

Processing Wartime Cotton Goods To Meet Military Requirements

(Continued from Page 26)—are finished in a dry state the finishing formula may be reduced 50 per cent with similar results obtained as in wet finishing. The wet cloth is finished on a padder mangle placed in front of a range of dry cans. Run through this mix, dry on cans and frame to width on a tenter frame, preferably covered.

A typical formula used for level results in continuous dyeing is made up of 0.95 ounces per gallon Vat Olive Green B, four ounces per gallon Khaki 2GGA Double Paste and 4.2 ounces per gallon Olive R Double Paste. Other color combinations employ Vat Brown GA and Vat Olive T as well as direct vat blacks with varying success. It is advisable to use a small amount of non-foaming penetrant in the padder, since this will assist the reduction bath to produce better penetration. Some dyers find that better quality goods are obtained if a penetrant is added to the booster bath (not over 0.2 or 0.3 ounces per gallon of penetrant.) Dyed goods are put through a running cold wash in one box, then given oxidation in two boxes at 160° F. and a light soaping off in final boxes. From the continuous machine the dyed goods are run on an open width soaper and finished in similar manner to goods dyed by the pad-pigment-jig reduction method.

Experience in dyeing many heavy cotton fabrics requiring excellent penetration and level dyed shades has proven the necessity of using the most modern types of padders.

The two American Viscose Corp. plants at Lewistown Pa., and Parkersburg, W. Va., have completed installation of cord twisting machinery and looms for weaving rayon tire cord fabric, it has been announced. This equipment was installed at the request of the War Production Board, in order to increase the production of rayon tire fabric needed for heavy-duty tires for bombers, fighter planes, Army motor vehicles and artillery, and commercial buses and trucks.

The Lewistown plant in June, 1944, completed conversion of a portion of its rayon yarn producing facilities to manufacture approximately 20,000,000 pounds annually of high-strength rayon for use in tire cord fabric. This yarn can now be twisted and woven into tire fabric by the new equipment just installed for these operations. The Parkersburg plant will obtain its high-strength yarn from the company's plants at Front Royal, Va., and Marcus Hook, Pa. The Front Royal plant is currently being expanded by government order to produce approximately 82,000,000 pounds a year of high-strength rayon yarn for use in tire fabric.

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OBITUARY

E. F. Redding, sales manager for American Yarn & Processing Co., Mount Holly, N. C., died Dec. 15 in a Philadelphia hospital. Funeral services were conducted at Charlotte, where Mr. Redding made his home, and interment was at Cuthbert, Ga.

William Arthur McNeace, 54, who had recently gone to Ellijay, Ga., after serving more than ten years as overseer of the weave room at the American Spinning Co., Greenville, S. C., died Dec. 1 after an illness of one week. He is survived by his widow and three sons.

Anders R. Akerstrom, 61, technician representative for the National Aniline Division of the Allied Chemical and Dye Corp., New York, died of a heart attack at Greensboro, N. C., Dec. 7 and was buried there. He was a native of Sweden, coming to America in 1900, and in recent years made his headquarters in Charlotte.

Fred A. Matthes, Sr., 74, one of the owners of Spofford Cotton Mills and also chairman of the board of directors of the Tidewater Power Co., Wilmington, N. C., died Dec. 4 at his home in Wilmington. He is survived by his widow and four sons.

S. R. Bergman, 67, consulting engineer in the Thomson laboratory of General Electric's Lynn, Mass., River Works, died Nov. 25. He held 53 patents covering motors and generators.

William L. Pierce, Jr., associated with the textile division of National Starch Products, New York, died of a heart attack at his home in Englewood, N. J., Nov. 22. Prominent in the textile finishing industry for many years, he was a past president of the National Association of Finishers of Textile Fabrics.

M. Bradford Hodges, 52, Southern representative for Roger W. Cutler, American Paper Tube Co. and other manufacturers of textile mill supplies, died Dec. 11 at his home in Atlanta, Ga., shortly after suffering a heart attack.

Second Lieut. John Sheehan, Jr., 21, son of the assistant dyeing superintendent for Bibb Mfg. Co. at Macon, Ga., was killed in action in France Nov. 17. He was a graduate of Georgia School of Technology and received his Army commission early this fall, embarking for France in October. He was a nephew of L. C. Sheehan, director of the Bibb efficiency department, and Robert E. Sheehan, manager of the company's research plant.

Lieut. Edwin R. Johnson, son of W. P. Johnson, assistant superintendent of Inman (S. C.) Mills, was killed in action over China Nov. 21. Lieutenant Johnson, a graduate of North Carolina State College, was flight engineer on a B-29 Superfortress. Among survivors are his parents and wife.

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Butterworth Buys Textile-Finishing Machinery Company

H. W. Butterworth & Co., Philadelphia, Pa., pioneer manufacturer of textile finishing machinery, has purchased the good will and manufacturing rights of the Textile-Finishing Co., located at Providence, R. I. The plant at Providence will be continued in operation as a division of the Butterworth organization under the management of Edward Wharmby, who has been associated with the purchased company for many years.

"The additional production facilities acquired through this purchase will help us materially in relieving our already over-burdened manufacturing organization," states President Harry Butterworth, "and will put us in a better position to supply the tremendous shortage in textile finishing machinery." Real estate involved in the deal includes the machine shop building with approximately 85,000 square feet of floor space together with a large amount of manufacturing equipment located in the building.

After November, 1943, Textile-Finishing Machinery Co. went into receivership and was acquired by Jacob Ziskind. Realizing that the textile manufacturers of the world would soon feel the shortage of finishing machinery, Mr. Ziskind approached the Butterworth organization and soon effected a sale.

Crompton & Knowles Wins Fifth "E"

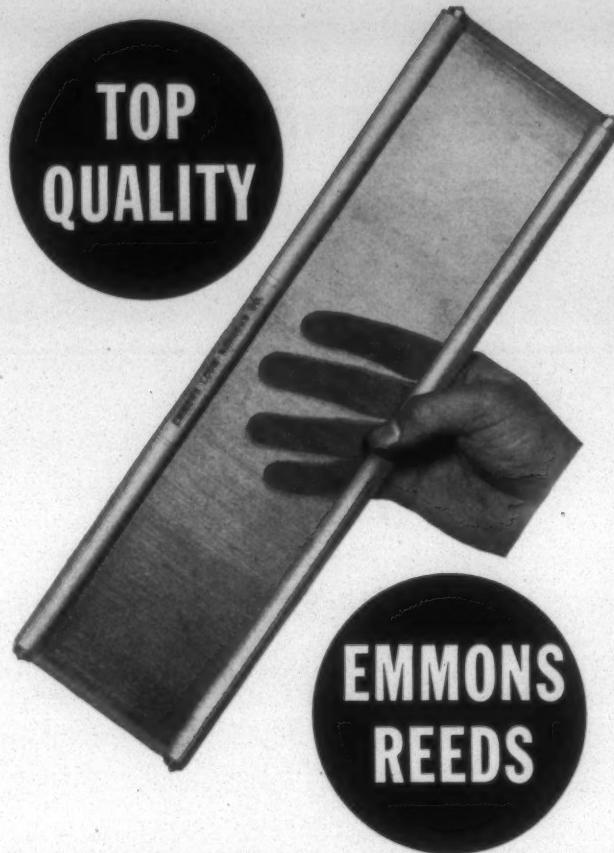
Three more plants associated with the textile industry have been honored recently with Army-Navy "E" Awards for outstanding activity in war production. Crompton & Knowles Loom Works at Worcester, Mass., has received a fourth star for its pennant, originally presented Nov. 28, 1942. Receipt of this fifth "E" by the company means that the star-decorated flag will be retained for a full year (rather than six months) before renewal is considered again.

Production of dye intermediates has won the military award for the General Aniline Works Division of General Aniline & Film Corp., Rensselaer, N. Y. Outstanding output of coated fabrics for military uses has resulted in award of the "E" pennant to the Fairfield, Conn., plant of E. I. du Pont de Nemours & Co.

Manhattan Rubber Again Wins Prize

For the second year, highest award in the National Victory Garden Institute competition was given to the Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., "in recognition of its distinguished record in the encouraging of Victory Gardens and more food preservation." More than 400 gardens were worked by Manhattan's employees on the ten and one-half-acre project, and this project is considered one of the company's most popular employee relations activities. There were also over 1,000 employee home gardens stimulated by the project.

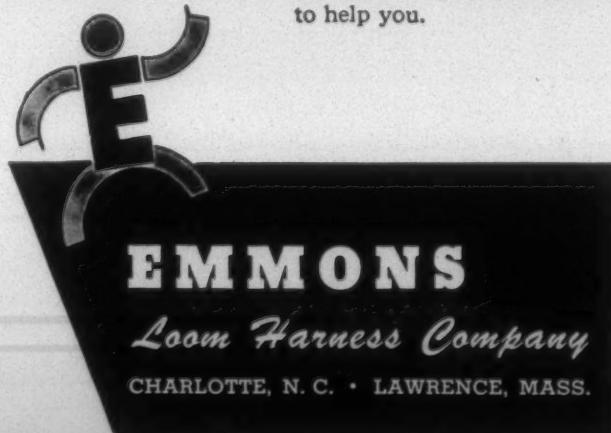
A booklet entitled "19 Reasons Why It Is the Dominant Drive of Industry" has been published under the direction of the engineering research committee of the Multiple V-Belt Drive Association, 140 S. Dearborn Street, Chicago 3, Ill. Copies of the booklet, which describes basic advantages of this type of power transmission, may be secured upon request.



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RAGAN RINGS not only increase spindle efficiency but also help to improve yarn quality. There are definite reasons why . . . ask for the whole story and samples

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RAGAN RING COMPANY

Box 174, Station A

Atlanta, Georgia

South Carolina Operating Men Discuss Problems

(Continued from Page 33)—on it now for something like 18 months and prefer it to the wool.

CHAIRMAN LOCKMAN: What is the difference in the life of that blanket and the life of a wool blanket?

MR. DELANEY: Well, we run 24 hours a day. A wool blanket has a life expectancy of perhaps eight to ten days, or perhaps less than that. We were rather discouraged about the quality of the wool we were getting some 18 months ago and decided to go to this cotton. Now our blankets last anywhere up to three months; some of them longer than that. We get pretty good service out of them.

D. H. ROBERTS, overseer weaving, Startex Mill, Tucapau, S. C.: Do you use the same length as with wool?

MR. DELANEY: No, we use it a little bit longer. At first we used five to ten yards; now, to make a little better cushion, we use five to 15 yards. It saves some \$500 a year. The wool blanket has a tendency to trim itself; it frizzles off. With the cotton blanket, we find if we clean that cotton blanket once a shift it will keep it in good shape and it will do very good slashing. You do not have to trim it off.

CHAIRMAN LOCKMAN: Who is using a synthetic roll covering on the slasher?

MR. BAKER: We have one, a single Dayco roll, which we installed on one slasher in March, on the finisher roll. On that particular roll we are slashing about 1,500 ends of 20/s warp, and it is doing a very satisfactory job. It was necessary, in order to get proper squeezing, to apply additional weights. I believe our roll was about 400 pounds; and we added approximately, by means of levers, some 350 pounds more of journal. We have about 1,100 pounds on the base roll. It is very satisfactory. We have not done anything to the roll. There are some slight cracks on the ends. They do not affect the operation, but perhaps we can prolong the life of the cover by grinding it down.

PRESIDENT ROGERS: I understand that some mills have used synthetic coverings for slasher rolls. Do you notice any trouble, where ply yarn is used on the selvage, with that wearing the synthetic roll faster than the other part of the roll, or do you have some trouble with excess size being left on the roll?

MR. BAKER: We have not since we have applied the additional weight. Before those additional weights were put on that was very much the case. We are running eight-ply ends in each selvage, and as near as we are able to determine there is not too much to affect running qualities.

CHAIRMAN LOCKMAN: How thick is the covering?

MR. BAKER: Seven-eighths-inch. I think it should be one-inch, possibly.

CHAIRMAN LOCKMAN: You think one-inch would be better than seven-eighths-inch?

MR. BAKER: Yes. We are ordering another one for experimental work and are getting a softer one. Dayco's recommendation is that we get a softer one; they think we shall get better covering and be able to do away with the weights, possibly.

A MEMBER: I wonder if you have had a chance to check on the difference in power consumption.

MR. BAKER: We have not, no. I do not believe it is

much. The lever arms are some we improvised. There is no heat on those ends, and therefore I do not think there is much power dissipated to the journals.

JOE C. COBB: I should like to ask the gentleman if he notices any difference in the amount of size in the yarn.

MR. BAKER: We ran a great number of tests in our laboratory, trying to determine the size content, with the conventional blanket-covered rolls and the Dayco roll. We found that perhaps our variations are more than they should be but, summing the whole thing up, we cannot tell any difference. We have wide variations on both and in the long run have been unable to determine any real difference.

QUESTION: What is the life expectancy of that roll?

MR. BAKER: I mentioned that we do have some cracking on the end of the roll. Perhaps if we had had a softer roll and were not forced to run that extra weight that cracking would not have resulted. Since March it has been running some on the third shift. Possibly it has been averaging 110 to 120 hours a week. I believe it can be run for three or four months, or possibly longer. If we take it out and resurface it and do not destroy the cushion, possibly we would be able to run it a couple of years.

CHAIRMAN LOCKMAN: That is an experiment, isn't it, Mr. Baker? I think what Mr. Baker is trying to say is that he has too hard a roll and roll covering, and with a softer roll he would expect longer life. Let's go on to the second question: "What results have been obtained from using shock absorbers under loom legs?" That does not necessarily mean something that you bought; it can mean something that you made—anything that you put under the loom to stop the vibration.

MR. DELANEY: We had an experiment along that line several years ago. We replaced an "E" model loom with an "X" model. We had cushions under them, but that did not solve the problem. We had to call the Draper people in.

MR. McCALL: I have had some experience on two looms with cushions. They did help. Eventually they had to brace the mill; they had to spend \$125,000 to brace the mill, after shaking a few bricks out of the top story. Eventually it was found that was not enough, and they had to go outside the mill and build concrete pillars to brace it further. That did not solve it, however, and we found we had to stagger our speeds. That cut down the vibration.

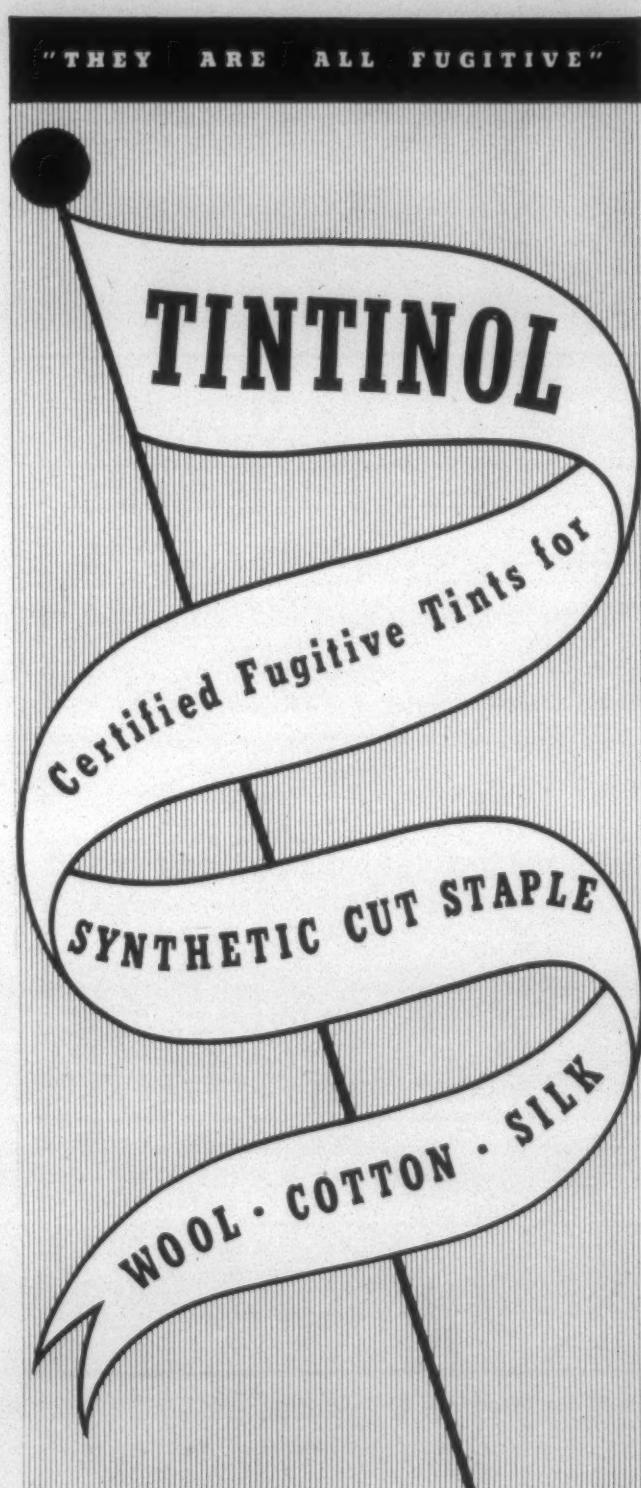
CHAIRMAN LOCKMAN: In staggering your speeds did you lose speed, as a whole?

MR. McCALL: No.

CHAIRMAN LOCKMAN: Where you dropped five picks on one you raised it five on another?

MR. McCALL: We were running a standard speed of 220 picks a minute and had a few doing 224—not many, of course. We dropped it down. Some were doing 194.

WALTER M. BRICE, JR., sales office manager, Draper Corp., Spartanburg, S. C.: Has anybody here had experience with a felt pad on a wood floor? I have heard that before there were the restrictions on loom building that this felt pad was tried on a wood floor and the vibration resulted in tearing up the wood floor, whereas they had no trouble at all on concrete. Last week we had a complaint



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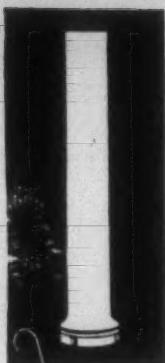
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from a customer that the felt was coming in various compositions and some of it was better than other kinds. That is being handled by the felt people at this time. I am anxious to learn if anyone has had experience with felt pads on wood floors.

MR. McCALL: We did try one on a wood floor, and it was not satisfactory at all. We probably did not get the proper grade of felt.

MR. DELANEY: We are running "X" model looms on a wood floor with felt pads. They run all right.

FRANK MADDEN, overseer weaving, Seminole Mills, Clearwater, S. C.: On the wooden floor we get good results from the felt pad because it keeps down vibration.

CHAIRMAN LOCKMAN: You do not have any trouble with its pulling your floors up, or anything?

MR. MADDEN: No, sir. We have been running that way about two years.

JOE C. COBB: Some of these fellows who are using felt pads have not said why they are using them. In other words, they have not said they reduce supply costs or anything of that kind.

CHAIRMAN LOCKMAN: How about that, Mr. McCall?

MR. McCALL: We started using them to get out of bracing the mill. We found we had to brace it, anyway, but just continued using them.

A MEMBER: On the "X" model looms it is all tied through the loom. On other looms they have some outside support. When you put the felt pad on there it causes more vibration.

A MEMBER: Some automobile manufacturers, you know, mount their motors on rubber. I should like to ask Mr. Brice what they are doing with looms. I was up at Hopedale recently and saw a loom running 225 picks a minute, and it looked as if it was mounted on rubber. It was about to jump off the floor.

MR. BRICE: I was up at Hopedale and I did hear something about trying to mount it like an automobile motor. I did not see it and did not get any of the results on it.

LEWIS BURGESS, Crompton & Knowles Loom Works, Charlotte: I think the use of the shock-absorbing pads came about mostly to begin with by securing looms to cement floors to eliminate the necessity of anchor bolts to hold the looms. I was in a mill a while ago where there was very great vibration, and it was necessary to put a bolt all the way through the floor, with a nut on the ceiling below. Even where they have to do that they are so enthusiastic about the results of the pad that they use the pad also on those looms. They spoke of the elimination of vibration and also spoke of the saving in loom supplies.

W. F. DAVIS, general superintendent, Convenience, Inc., Greenville, S. C.: Our plant superintendent got hold of a dozen of those pads. I am not sure whether they are felt or cork or just what. We had some looms that were actually moving back and forth on the floor; and you could not bolt them, to save your life, and make them stay in place. They were moving possibly as much as two inches back and forth, with the lay. They went in one week-end and pulled up those looms and put in those pads, and the looms are just as solid now as these seats you are sitting in. We are

very enthusiastic about them. We have them both on the first floor and the second floor. We are not anxious now to stop production to put in a new floor, even if we could get the proper materials to do it. So we are going in and putting these pads down. I think the pad will stop some of the troubles you gentlemen are having.

QUESTION: What is the thickness of the pads?

MR. DAVIS: About one-half of an inch.

MR. DELANEY: About three-quarters of an inch.

CHAIRMAN LOCKMAN: We will go on to the third question: "What is the ideal temperature to maintain in the weave room over the week-end?" Winter is here now; and everybody has trouble, probably, in starting up unless they are keeping the heat and the humidity right. I think the humidity should come in there.

R. L. SWETENBURG, general superintendent, Ware Shoals (S. C.) Mfg. Co.: We have automatic devices which control the heat and the temperature. We keep the temperature at 80° and relative humidity at 60. If we do not do that we get a lot of shedding off on Monday morning.

MR. DELANEY: Do you condition your filling and keep it in the weave room over the week-end?

MR. SWETENBURG: Yes, right in the weave room.

CHAIRMAN LOCKMAN: The fourth question is: "What results have been obtained by reeding light sley goods, such as gauze, two per dent instead of one per dent?" I know a lot of that has been done. A lot of us started off on gauze single dent, as we call it, and have gone on to where we reed two to the dent.

MR. McCALL: We reed two to the dent.

CHAIRMAN LOCKMAN: Is there any difference in the quality.

MR. McCALL: We cannot tell any difference. It seems to run about as well as it did the other way.

QUESTION: What is the advantage of reeding this way?

CHAIRMAN LOCKMAN: I have heard that where you go to two to the dent you have, of course, more space in the reed there and the work goes better. I have heard that. I do not know. I have also heard that you have a streak in the cloth. Do you have that, Mr. McCall, and if so, what do you do?

MR. McCALL: Set the reed to cover.

MR. DAVIS: We have tried two per dent and find it runs a little better. You do not get as good looking a piece of cloth, or at least I will say we could not get it. The threads just naturally group together. I am speaking in terms of 44-36 and 44-40. The threads were grouped in twos, and we did not think it was quite as good looking. We did not think it looked quite as good. We stayed on one.

QUESTION: I should like to ask these gentlemen if they have any trouble in maintaining their standard width on single dent, more so than on two per dent.

MR. DAVIS: We did not run into that difficulty on it.

CHAIRMAN LOCKMAN: We will pass on to the last question. It reads: "What per cent increase in loom speeds has been obtained on "E" model looms where spreader attachments have been added? Have shuttle consumption and



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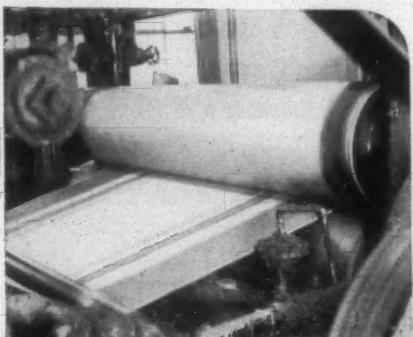
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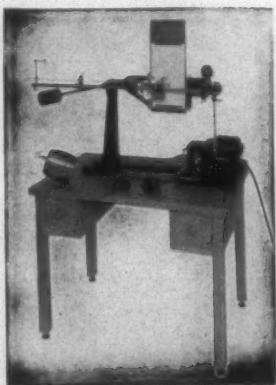
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loom supply replacements increased on the looms so equipped to the point that it would not be profitable to attain this higher speed?"

Let's take the first part of that and discuss it. What per cent of increase in loom speeds have you obtained on "E" model looms where spreader attachments have been added? The spreader attachments are what most of us call braces—bracing the "E" model loom in order to obtain more speed. Who has had experience on that? Is there anybody here from Honea Path?

M. C. CHALMERS, overseer of weaving, Chiquola Mfg. Co., Honea Path, S. C.: We have spreaders on 426 looms. We have been running some of them around 12 months since first put on. We have about eight per cent increase in speed. We are satisfied with them and are still putting them on. The increase in supplies is not so great. As to our castings, we do not see any difference in our castings. We use somewhat more levers than we did, as we all do on high-speed looms—"X" models. As to shuttles, we do not have any trouble with the looms throwing out shuttles and bursting them. Naturally, in making more picks per minute they are going to wear out sooner. We are very well satisfied with our spreaders.

W. W. COBB, superintendent, Norris Cotton Mills Co., Cateechee, S. C.: All of us have trouble with loom fixers. The more you put on a loom the more headaches you have, I think. I should like to know about the fixing of those looms. Do they have to have more fixing, or less?

MR. CHALMERS: Well, you do have a few more flags on the looms, but it is not breakage. It is shuttles bouncing and things like that.

CHAIRMAN LOCKMAN: In other words, you have more loom fixing to do, but it is not due to breakage. Is that it?

MR. CHALMERS: Yes, sir.

QUESTION: Would it be eight per cent more? You say you got eight per cent more production.

MR. CHALMERS: No, not that much.

CHAIRMAN LOCKMAN: In other words, your opinion is that it is a paying proposition? Your increased production would more than offset your supplies, etc.?

MR. CHALMERS: Our loom fixers are handling the same number of looms.

A MEMBER: I should like to ask Mr. Chalmers if he probably did not give those looms a good overhauling when he added these attachments, which probably might enter into the picture.

MR. CHALMERS: No, I did not. We just put the spreaders on and started the looms up. We did not do any overhauling at all other than what the men did who came and put the spreaders on.

JOE C. COBB: I should like to ask what is the speed at which you are actually running the loom.

MR. CHALMERS: 177½.

JOE C. COBB: Do you get the same efficiency that you get with lower speed?

MR. CHALMERS: Yes, sir. I should like to answer your question further. I can say that you can be pretty well assured that your loom efficiency will stay within one per cent of your speed increase. That is what we found.

CHAIRMAN LOCKMAN: In other words, if you gain eight per cent in speed you get seven per cent efficiency.

MR. CHALMERS: Not necessarily. You may get more.

MR. BRICE: Some 15 or more years ago we introduced the idea of a top girt on our "R" model looms. I do not think there are any in this section. They have them in the West Point section, on heavy duck. We later brought out the "X" series of looms and put a top girt on wider widths. In 1934 we decided to put the top girt on all "X" series of looms regardless of the width, and from that time forward we have used the top girt construction on the "X" series. There is no question, in our opinion, that it adds to the efficiency. It had not occurred to us that the mills would be likely to spend much money in revamping "E" model looms, but there has been such keen interest in it that we now have a spreader which is adapted for "E" models.

MR. D.: I should like to ask the gentleman if he thinks it would pay. I understand that one cannot buy a loom from the Draper Corp. for any immediate delivery.

MR. BRICE: Yes, sir, it is true.

MR. D.: If a man anticipated buying looms within the next three or four years (because I understand he cannot get delivery much before that), would it pay him to put spreaders on his "E" model looms for that period?

MR. BRICE: Well, I think the men who have tried it are better qualified to answer that than I am. We are always willing to try any device which would be advantageous.

In connection with building new looms, I would like to say that at this time we are building looms that were allocated before the restriction was amended by the War Production Board. We are doing the best we can but are facing the situation all of you face—manpower shortage. That is very, very acute.

MR. BURGESS: I should like to ask a question about this spreader. There has been an installation made on 12 C. & K. looms. According to the man who makes the so-called spreader, the operator of that mill seems to be very enthusiastic about it, and they probably will put on more. He has found it necessary, however, to install a larger motor—that is, a motor of increased horsepower. I should like to ask if that is necessary on the looms these gentlemen have been talking about.

MR. CHALMERS: We did not change the motor.

CHAIRMAN: Are your looms individually driven?

MR. CHALMERS: No. Part of them are.

MR. DELANEY: We had to increase our horsepower.

CHAIRMAN: It stands to reason that if your motor is pretty well loaded and you go to this increased speed you would certainly have to have a larger motor to increase your speed.

MR. CHALMERS: We have 177½ picks, and one-half horsepower is pulling these looms with that attachment.

CHAIRMAN LOCKMAN: Mr. Chalmers, you, of course, went into the shuttle consumption and loom supply replacements. Do you think the extra loom supply costs and shuttle consumption would make it unprofitable?

MR. CHALMERS: Oh, no. If it were unprofitable we would not continue to put on the attachment.



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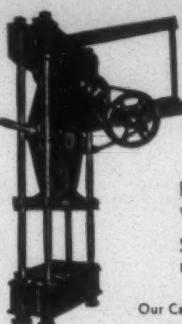
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Textile Export Outlook Is Bright

Unprecedented export demands for 3,000,000,000 square yards of cotton cloth annually will be met after the war by the textile industry, is the prediction of Robert Sweeny, chief of the textile unit, Bureau of Foreign and Domestic Commerce.

In justification of his forecast, Mr. Sweeny states: "There is an acute world shortage, and the United States after the war will supply many new markets in countries which were unfamiliar with American textiles before the war."

U. S. exports in cotton cloth between 1936 and 1939 averaged 282,000,000 square yards annually, and only 818,751,000 square yards were exported in 1920, the peak year. Mr. Sweeny said that only the United States, India and the United Kingdom will be in position to do any sizable exporting after the war, and it will take England some time to restore its export business. Thus the United States stands to fill a large part of the world's needs for cotton cloth which will be tremendous due to wartime underconsumption.

U. S. exports will replace those formerly made by Germany, Japan, France and the Netherlands, all of which will require years to rehabilitate their industries.

Leather Belting Manual Published

A new "Leather Belting Selection and Application Manual" is being distributed by Graton & Knight Co., 356 Franklin Street, Worcester 4, Mass. The 56-page booklet was developed with the purpose of simplifying the subject of power transmission so that both distributor salesmen and belt purchasers can locate and use the basic facts quickly and correctly. Data, charts and specifications are offered to support the following heads: how to pick the right leather belt for the job, including information on tannages, the figuring of belt dimensions, etc.; how to decide between modern group drive and automatic tension (pivoted motor base) drive; how to figure tension, efficiency, cost, etc.; and other features. A copy may be secured by writing to Graton & Knight.

Arlington Mills Publishes Booklet

Manufacture of worsted yarns and fabrics is described and profusely illustrated in a new brochure issued by Arlington Mills for the use of store training departments, textile educational groups and store personnel. The title, "Naphtholated Wool Worsted—Fleece to Fabric," is descriptive of the content, which traces the process from the raw wool and the sources from which it is derived through to the finished garments and their identification. Anticipating the questions which arise when worsteds are discussed, including the hardy perennial query, "What is the difference between wool and worsted?" this book attempts to provide all answers. Every important process in the production of worsteds is explained and pictured.

The name of the Kilcommons Chemicals Corp., Providence, R. I., has been changed to Textile Chemicals Corp. of Rhode Island, and Fred Weller has been named vice-president and general manager. James A. Kilcommons has resigned as treasurer and director, and is no longer a stockholder in the corporation.

Steps in Pre-termination Procedure Outlined By War Department

Pre-termination planning of contract settlement is like a "stitch in time." Everyone with a war contract realizes that at any time it may be terminated. When it is terminated the task of settlement of the contracts and the disposal of property resulting from the contract becomes a reality. Therefore, the War Department, in order to do everything possible to make easier the task of settlement and disposal, has launched upon an aggressive policy of pretermination planning.

Pre-termination of contract settlement is divided basically into two phases. The first phase, or planning, involves the general study of the situation, setting up an adequate termination group within the contractors organization and in general arriving at certain lines of approach to the problem.

The second phase is that of reaching certain agreements, either formal or informal. In the informal agreement the contractor and government might agree on all but a few points and will never get around to signing a formal agreement which actually becomes a part of the contract. In any event the agreement is put in "cold storage" to be brought out at the time of termination. When contract termination actually arrives the contractor in many instances will have his disposal problem whipped, will have the cost profit angle completely worked out, thus saving many man hours. It is a case of doing tomorrow's job today. However, if the contractor does not care to come to an agreement, the advance planning will do a great deal towards shortening his settlement time.

At the present time the War Department has terminated over 28,000 contracts and all but 4,000 have been settled. Of this number 3,200 contracts are pending settlement because the contractor has failed to submit a claim. Strangely enough, 40 per cent of the 3,200 are being held up because the contractor has not yet prepared an adequate inventory. In order that a contractor holding a large war supply contract may hasten his reconversion to civilian production, he should adopt an active pretermination policy, and get in touch with his contracting officer who will make the necessary arrangements within the War Department.

The chiefs of the various technical services of the Army now have lists of major contracts to be terminated at the end of the war in Europe and already have been ordered to communicate with the contractor to be affected and suggest that a pretermination plan be started. After all, not only does industry gain by this method but the load of termination problems on already over-taxed military personnel is considerably lightened as well.

New Rubber Synthetic Is Announced

Development of a new rubber synthetic, Chlorinated Isopol, has been announced by the Union Bay State Chemical Co. of Cambridge, Mass. The new synthetic is suggested as an ingredient in adhesives, paints, lacquers, inks, etc.; for fire-proofing and moisture-proofing fabrics; and wherever sound and heat insulation qualities are desired. Not yet standardized in viscosity range, the production of Chlorinated Isopol is sufficient at present to enable sampling and service of reasonably sized orders, but large quantity orders cannot be filled, the company states, until new, expanded production facilities are in operation.



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Maintenance of Union Membership

(Continued from Page 16)—only if and so long as such employer maintains himself as a member in good standing with the organization. Will anyone imagine the government issuing such directive, or would the employers' organization more likely find itself speedily the object of a prosecution under the Federal anti-trust statutes?

The element of maintenance of membership which seems most unjustified is the requirement that the compulsion upon the employee to remain in his union shall be furnished and exerted by the purchaser of the employee's labor, that is, his employer. The union which has made it its business to wage economic warfare upon the employer is to be maintained by pressure from the employer upon his employees.

It is an entirely reasonable proposition that if within the ordinary principles of the law of contract, an employee has made an agreement with a union, obligating himself to belong to it and to support it, then the union should be able to hold him to such an agreement in such sense and to such extent as the law may authorize and require. But it is a completely different matter to require the employer, not a party to the agreement, to enforce it on behalf of the union, and in so doing, to impose upon the employer not the consequences provided by the law of contracts, but a consequence of an entirely different nature, that is, discharge from his employment, which might be of quite as great an injury to the employer as to the employee. No matter how much it may serve the convenience of one of the parties to an agreement, a stranger to that agreement is not generally called on to enforce it, and certainly not when his doing so would be to his own detriment. It is, moreover, to be noted that while the employer is required to enforce the union-employee agreement as against the employee and in behalf of the union, he has no corresponding right, or power to enforce anything in that agreement as against the union and in behalf of the employee.

Even when authorized by an employer to do so, the respondent company has always declined to take part in enforcing agreements he may have made with others, that is, for example, by making deductions from his wages for the convenience or benefit of such others. This company's business is maintained by no governmental decree, and in collection of moneys due it is neither assisted nor guaranteed by any third party. Its income, moreover, when received, is subjected to what may be restrainedly termed substantial Federation taxation. It seems strange that it must, under order of the same Federal Government, guarantee the union's income before it pays its employees' wages—an income which, ironically enough, after it has been collected for the union and turned over to it, is subject to no income taxation whatever.

Above all, it seems passing strange that these things are enjoined upon the employer—who, within recent years, has been little less than hounded with the categorical order to keep "hands-off" the relations between his employees and their union. He has been admonished until he now generally understands that his employees going into a union which shall deal with him for them is none of his affair. Yet now, he is told that it has become his affair to keep them in that union. As they go in, he must turn his head and do nothing to hinder or impede them. But if one makes a move to come out, the employer must suddenly

move into action, abandon the neutrality hitherto required of him, and drive the offending employee back into the union upon penalty of being discharged.

The National Labor Relations Act, when it directs an employer not "to encourage" or contribute any form of "support" to any labor union, seems expressly to forbid what the National War Labor Board now orders. (And the exception in the National Labor Relations Act for the closed shop is irrelevant here, for as an exception, it is not to be expanded beyond its own terms and by those terms, it relates to a voluntary agreement.) In any event, it is not to be denied that the order now recommended is inconsistent with the spirit of the National Labor Relations Act. The essential and pervading idea of that statute is neutrality on the part of the employer with regard to the relations between his employees and their union. By this order, he is directed to interfere in those relations if they are not going to suit the union, and in behalf of the union, to influence, restrain and coerce his employees with all the pressure and by all the means at his command.

The provisions which this company has been willing to agree to as a contract between it and the union here involved are numerous and substantial. It seems likely that such provisions would have been entirely sufficient for the union to accept as the terms of a first contract between it and the company were it not for the union's expectation that it could come to this board and get more. In such opportunism, however, the union may hereafter find that it has "sold its birthright for a mess of pottage."

In matters affecting the relations of parties who must live and work together, willingness is indispensable. Without it, little of a genuine or permanent nature is to be accomplished. Good will can hardly grow from the soil of compulsion. If the essence of a contract is a "meeting of the minds," then a contract which one party is ordered to enter into is no contract at all—nor is it an aid, but rather an obstruction, to harmony and a handicap to future agreement.

So here, the National War Labor Board will render no service, but rather a notable disservice, to the ultimate interests of employer and employee alike, by saddling upon this company a so-called contract to which there is no mutual assent. How much better it would be for the present and future relations of these parties if the union would accept the substantial agreement which the company is willing to make and by successfully living and working with the company under such a contract, demonstrate to all concerned the desirability of a broader and more complete agreement. Such is the slow and patient, but the only true and enduring path to industrial peace.

Hercules Booklet Describes Cellulose Plastics

A four-page folder printed in color, illustrating the properties of the cellulose plastics family, has been issued by the Hercules Powder Co. cellulose products department. Included in the display are tough, cloth-laminated Navy cargo containers; tubing which can be bent and flexed at 40 degrees below zero; transparent packages, and many different colored housings for radios, telephones and flashlights.

Aralac, first animal member of the synthetic textile family, is the subject of a feature story, with photographs, in the Dec. 4 issue of *Life* magazine.



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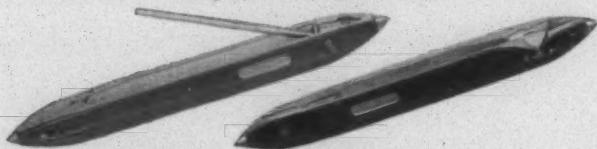
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Stronger Rayon for Tires Announced

A new principle in rayon tire construction which provides stronger synthetic rubber truck tires and assures substantially greater tire production has been announced by Dr. Sidney M. Cadwell, director of tire development for United States Rubber Co. Known as the "2,200 denier" rayon type, the new development consists of using stronger but fewer plies in the tire, Dr. Cadwell said. The new construction greatly reduces serious blow-outs, he stated, which formerly placed a tire beyond the possibility of repair.

The 2,200 denier rayon tire has twice the number of filaments twisted together as the 1,100 denier, Dr. Cadwell explained, which was the standard type previously used in conventional tires, and which the 2,200 denier now replaces in certain sizes of tires. Due to the greater strength of the heavier rayon, he said, tires built of the 2,200 denier are stronger than those built of the lighter 1,100 denier. As a result, blow-outs are reduced to a minimum. Further, the stronger individual rayon cords reduce rupture spread, thus making it possible to repair injured tires by recapping, an important factor in truck tire conservation.

In addition, the new construction will materially aid in increased truck tire production, according to Dr. Cadwell, because fewer operations are involved, and materials and component parts are reduced. A stronger eight-ply tire can thus be produced in place of the conventional ten-ply tire formerly made, and similarly, a better ten-ply made in place of the standard 12-ply tire.

N.A.M. Outlines Post-War Program

The National Association of Manufacturers has announced that it will carry to the public for acceptance and support a six-point program specifying the action that business will take to assure jobs and higher living standards in the post-war period. Ultimate objectives of the association's long term program is to create and put into action a process of prosperity during the post-war period which will enable Americans to "earn more, buy more, and have more."

The six points of the program are: (1) offering better values for consumers by improving production and distribution methods, which will make available more and better goods and will stimulate employment; (2) insistence upon full and free competition to reduce prices and to encourage the establishment of new enterprises, again stimulating increased employment; (3) bold investment of risk capital to back new enterprises and expand production, which will also make more jobs; (4) adherence to wage policies which give workers a fair reward for work accomplished; (5) providing better tools and improved working conditions as an aid to higher production and fatter pay envelopes for individual workers; (6) keeping open all possible advancement opportunities for the individual worker, to encourage initiative and greater production by assuring that such personal effort on the part of the workers will be rewarded.

Surplus Property Items To Be Listed

First editions of the U. S. Treasury Department's *Surplus Reporter* have been issued from the regional Offices of Surplus Property, and others will follow in rapid fashion until the eight commodity divisions of the Treasury's Office of Surplus Property are covered in the editions. By means of the *Surplus Reporter* firms on the Treasury's mailing list

will be advised what the Treasury has to sell without contacting each of the 11 regions in the country.

The eight commodity divisions, with one edition of the *Surplus Reporter* to be devoted to each, are furniture, hardware, machinery, automotive, textiles and wearing apparel, medical and surgery, paper and office supplies, and general products.

Textile Research Institute Publishes Report On Textile Drying

A report on "The Drying of Textiles" has been published by the department of information of the Textile Research Institute, Inc., New York. This represents a compilation of the results of a three-year program of textile drying research conducted by the institute. These results have appeared in various places but have not previously been gathered together in one report. The study was conducted under the direction of an administrative committee for drying research of the institute under the chairmanship of Dr. Albert C. Walker of the Bell Telephone Laboratories, Inc.

Publication of the complete report of this extensive research is particularly appropriate at this time, since the Textile Research Institute, Inc., has recently started a program involving the study of radiant energy drying, at its applied research laboratories in Princeton, N. J. Consequently the current report may be regarded as foundation reading for those interested in further work on this important subject. At a later date, progress reports on the radiant energy drying study will be published by the institute and will thus supplement this current summary.

The drying booklet represents a new form of these supplementary reports in that they now correspond to the size of *Textile Research*, the official publication of the Textile Research, Inc., and the Textile Foundation. The purpose of this change is to enable members to bind the supplementary reports with their copies of the publication.

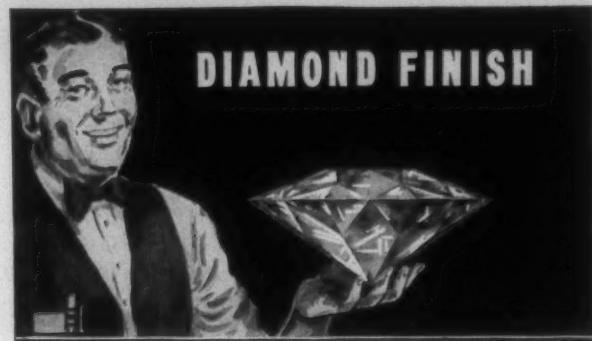
This report has been distributed without charge to members of the institute. Price to non-members is 75 cents per copy. Requests should be addressed to the Textile Research Institute, Inc., 10 East 40th Street, New York 16, N. Y.

Jones Tachometers Are Described

Jones Motrola Co. of Stamford, Conn., manufacturer of tachometers and other industrial products, has issued a pamphlet which describes four models of Jones individual-mount tachometers and the Jones multi-range portable hand tachometer. The bulletin shows both full-face and profile views of the individual tachometers, r.p.m. ranges available, mounting dimensions, and includes prices for tachometers and appurtenances, a section on use and operation, and general installation data.

Hospital Blanket Standard Being Circularized

In accordance with a request from the committee on simplification and standardization of hospital furnishings, equipment and supplies of the American Hospital Association, drafts explaining recommended commercial standards for hospital blankets have been circulated to representative blanket manufacturers and hospitals. The present draft is a revision of a previous one and comments from the trade are invited by the National Bureau of Standards.



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ABINGTON TEXTILE MACHINERY WORKS, Abingdon, Mass. Offices at Boston, Mass., and Charlotte, N. C.

ACME MACHINE & TOOL CO., 2516 Wilkinson Blvd., Charlotte, N. C.

ACME STEEL CO., 2838 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 603 Stewart Ave., S.W., Atlanta, Ga.; P. H. Webb, Dist. Mgr., Sou. Sales Reps.: C. A. Carroll, 523 Clairmont Ave., Decatur, Ga.; Phone Dearborn 6267; Marcus M. Brown, 1231 Lexington Ave. (Phone 5583), Charlotte, N. C.; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn.; Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La.; Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

AKRON BELTING CO., THE, Akron, O. Sou. Reps.: Ralph Gossett and Wm. J. Moore, 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S. 2nd St., Memphis, Tenn.

ALLEN CO., 440 River Road, New Bedford, Mass. Sou. Repr.: L. E. Wooten, Fort Mill, S. C.

AMERICAN BLOWER CORP., P. O. Box 58, Roosevelt Park Annex, Detroit, Mich.; 7 N. 6th St., Richmond, Va.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Room 714, 101 Marietta St. Bldg., Atlanta, Ga.; Room 309, Jahncke Bldg., 816 Howard Ave., New Orleans, La.; 619 Texas Bank Bldg., Dallas, Tex.; 312 Keller Bldg., Houston, Tex.

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ARNOLD, HOFFMAN & CO., INC., Providence, R. I. Sou. Headquarters, 2130 N. Tryon St., Charlotte, N. C., Mgr., Walter T. Bunce, Phone 2-4073; Technical Service Men: Reid Tull, 116 W. Thomas St., Salisbury, N. C., Phone 1497-J; Philip L. Lavole, 2130 N. Tryon St., Charlotte, N. C.; John H. Graham, P. O. Box 904, Greenville, S. C., Phone 2922; John R. Brown, P. O. Box 749, Trussville, Ala., Phone 127; Warehouse, 2130 N. Tryon St., Charlotte, N. C.

ASHWORTH BROS., INC., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep.: Textile Supply Co., Dallas, Tex.

ATWOOD MACHINE CO., Stonington, Conn. Sou. Rep.: Fred Sails, Johnston Bldg., Charlotte, N. C.

AUFFMORDT & CO., C. A., 468 Fourth Ave., New York City.

BAHNSON CO., THE, 1001 S. Marshall St., Winston-Salem, N. C.; 886 Drewery St., Atlanta, Ga.

BANCROFT BELTING CO., Boston, Mass. Warehouse and Sou. Distributor, Carolina Supply Co., Greenville, S. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C., J. H. Spencer, Mgr.

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BARKLEY MACHINE WORKS, Gastonia, N. C.

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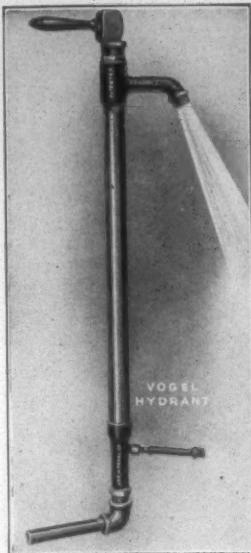
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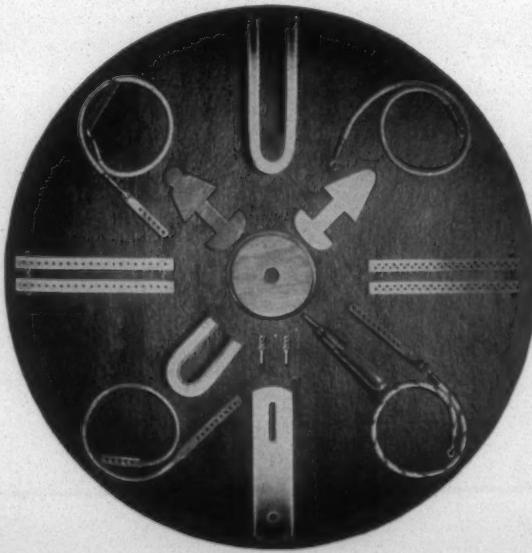
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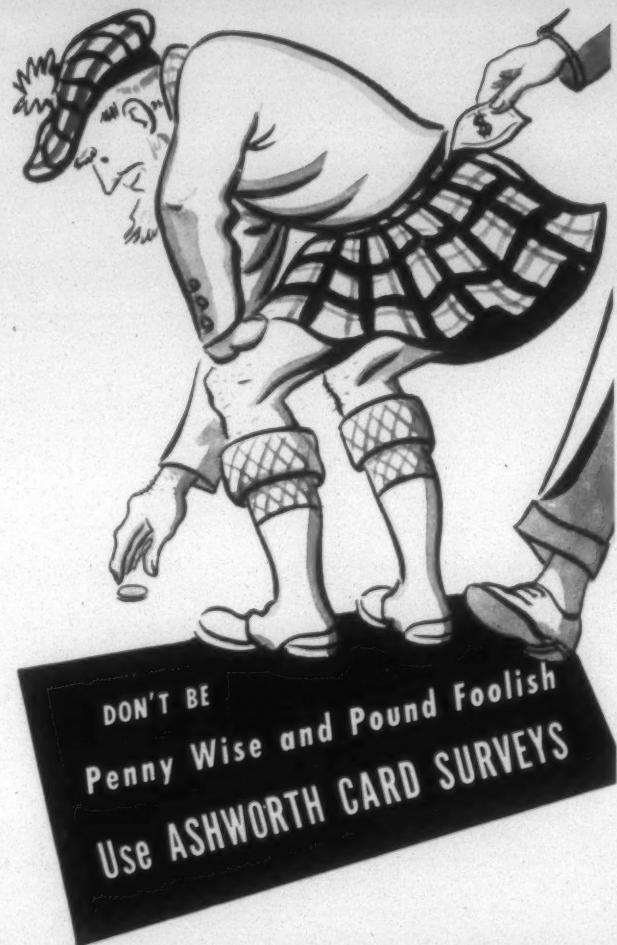
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